

**2007 UPDATE TO THE STATE OF MONTANA
MULTI-HAZARD MTIGATION PLAN AND
STATEWIDE HAZARD ASSESSMENT**

APPENDIX F

DISTRICT 5 DOCUMENTATION

Meeting Sign-in Sheets
Meeting Minutes
Survey Results
Mitigation Projects

SOUTH-CENTRAL MONTANA JURISDICTIONS

Big Horn County
Carbon County
Crow Reservation
Golden Valley County
Musselshell County
Northern Cheyenne Reservation
Rosebud County
Stillwater County
Treasure County
Wheatland County
Yellowstone County

**2007 UPDATE TO THE STATE OF MONTANA
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Meeting Sign-in Sheets

MONTANA STATE PRE-DISASTER MITIGATION PLAN UPDATE MEETING

DATE: 3/27/07

LOCATION: Billings - District 5

Name	Affiliation/Title	Miles Traveled Round Trip to Attend Meeting	E-mail Address or Phone No.
Daphne Digrindakis	Tetra Tech	224	daphne.digrindakis@tetra.tech.com
JAMES FULLER	AARR MONTANA SECTION EMERGENCY COORD.	15	117VR@AARR.NET
Jim KRAFT	Yellowstone Co. DES		jkg@co.yellowstone.mt.gov
Linda Oberg	Yellowstone Co DES		loberg@co.yellowstone.mt.gov
Charlie Hansen	MT DES	4	desdist5@mt.net
KENT ATWOOD	MT DES	224	kartwood@mt.gov
Dianne Lehm	Big Sky EDA		lehm@bigskyeda.org
Wyneth Friday	City-County Planning Dept.	0.5	Friday.W@ci.billings.mt.us
Annette Cabrera	Yellowstone County GIS mgr	-	acabrera@co.yellowstone.mt.gov
Ed Auker	Big Horn DES	100	edauker@co.BigHorn.mt.gov
Janelle Luppen	YC GIS		jluppen@co.yellowstone.mt.gov
Jeff Gates	Musselshell County DES	100	mxodes@midrivers.com

Meeting State Time: 12:35

Meeting End Time: 2:50

MONTANA STATE PRE-DISASTER MITIGATION PLAN UPDATE MEETING

DATE: 3/27/07

LOCATION: Billings - District 5

Name	Affiliation/Title	Miles Traveled Round Trip to Attend Meeting	E-mail Address or Phone No.
Bill Michaelis	Sheriff Lieutenant		bmichaelis@Co.yellowstone.mt.gov
Ken Mesch	Stillwater DES	100	Kenmesch@MSN.com
John Fleming	Sheriff	1/2 block	

Meeting State Time: 12:35

Meeting End Time: 2:50

**2007 UPDATE TO THE STATE OF MONTANA
MULTI-HAZARD MTIGATION PLAN AND
STATEWIDE HAZARD ASSESSMENT**

Meeting Minutes

**UPDATE TO THE STATE OF MONTANA PDM
PLAN AND HAZARD ASSESSMENT
PUBLIC MEETING MINUTES**

Date: Tuesday, March 27, 2007

Time: 12:34 pm – 2:46 pm

Place: Billings, Montana

Meeting Attendance:

James Fuller, ARRL Montana Section Emergency Coordinator

Jim Kraft, Yellowstone County DES

Linda Oberg, Yellowstone County DES

Charlie Hansen, MT DES

Dianne Lehm, Big Sky EDA

Wyeth Friday, Billings City/County Planning Department

Annette Cabrera, Yellowstone County GIS Manager

Ed Auken, Big Horn County DES

Janelle Luppen, Yellowstone County GIS

Jeff Gates, Musselshell County DES

Bill Michaelis, Yellowstone County Sheriff Lieutenant

Ken Mesch, Stillwater County DES

John Fleming, Yellowstone County Sheriff

Kent Atwood, State of Montana – DES

Larry Akers, Contractor

Daphne Digrindakis, Contractor

HAZARDS AFFECTING DISTRICT 5

Meeting Discussion on Hazards Affecting District 5

Possible addition of Pandemic Disease hazard. Currently, the Department of Public Health and Human Services is the lead agency and they would bring in or involve the Centers for Disease Control in any pandemic event.

Counties agreed that the top three hazards for the district were as follows: 1. Wildfire, 2. Flooding, and 3. Drought.

ASSESSMENT OF HAZARDS – DISTRICT 5

Drought

Wheatland – Change Low to High

Golden Valley – Change Low to High

Musselshell – Change Low to High

Stillwater – High

Yellowstone – Change Medium to High

Treasure – Change No Approved Plan to High

Rosebud – Change No Approved Plan to High

Carbon – Change Low to High

Big Horn – High

Crow Reservation – High

Northern Cheyenne Reservation – Change No Approved Plan to High

Yellowstone County noted that they originally rated drought risk as medium because some of the county is urban and the rest is agricultural, most in the form of farmland in the valley. If a small percent is agricultural, should the County upgrade to high? Also, should the Yellowstone River, a primary source of county water, be considered?

Discussion concluded that Musselshell County and all other counties in the district should be upgraded to high risk for drought. It was noted that a few years ago, all 56 counties in Montana were declared drought disasters so the State Goal should probably be upgraded in priority. Additionally, drought and fire are directly interconnected and more firefighting dry hydrants and retention ponds, etc. are needed.

Earthquake

Wheatland – Low

Golden Valley – Low

Musselshell – Low

Stillwater – Low

Yellowstone – Low

Treasure – No Approved Plan

Rosebud – No Approved Plan

Carbon – Low

Big Horn – Medium

Crow Reservation – Low

Northern Cheyenne Reservation - No Approved Plan

Big Horn County ranked earthquake risk as medium due to the extreme flood inundation hazard from Yellow Tail Dam. The County felt strongly that even though flood inundation is a low probability event, the risk is still high. The County asked if there is a state strategy that could mitigate this hazard; the response was no but it was suggested that better evacuation plans might help.

Flood

Wheatland – High

Golden Valley – High

Musselshell – High

Stillwater – Medium

Yellowstone – High

Treasure – No Approved Plan

Rosebud – No Approved Plan

Carbon – Low

Big Horn – Medium

Crow Reservation – Medium

Northern Cheyenne Reservation - No Approved Plan

Yellowstone County had a flood event about three years ago and would have updated this risk if possible. It was noted that the State Plan is required to annually review and local shifts could be incorporated at the annual update. Yellowstone County also has concerns about possible inundation by dam failure at Cooney Reservoir. County participants wondered why inundation maps are not reflected on floodplain maps. Additionally, the County discussed the problem with tree falls and debris ending up in the Yellowstone River and creating ice jam dams and flooding. Participants concluded that local debris removal was the key and suggested that Americorp kids may be hired for the job.

Big Horn County has ongoing ice jam flooding problems and may pursue sewage lagoon problems on the Crow Reservation.

Stillwater County is concerned about Mystic Lake Dam which is owned by PPL. There is an evacuation plan in place that makes power plant personnel responsible for notifying the public. The counties expressed doubt that such a plan is feasible as power plant personnel would be the first to get flooded and evacuate even though the water would be slow moving. Participants asked if the State could assist the County in obtaining an automated early warning system. Additionally, the County has asked DNRC about a dam safety program but the agency has not responded yet. It was noted that Libby, MT has an old project impact dam warning system.

Hazardous Material Incident

Wheatland – Low

Golden Valley – Medium

Musselshell – Medium

Stillwater – Change Medium to High

Yellowstone – High

Treasure – No Approved Plan

Rosebud – No Approved Plan

Carbon – Low

Big Horn – Medium

Crow Reservation – High

Northern Cheyenne Reservation - No Approved Plan

The Crow Reservation and Yellowstone County are rated as high risk due to the presence of pipelines, interstate corridors and railroad routes.

Stillwater County noted that their risk should be upgraded to high as the county contains mining operations and interstate and railroad transportation corridors.

Landslide

Wheatland – Not Assessed

Golden Valley – Not Assessed

Musselshell – Not Assessed

Stillwater – Low
Yellowstone – Low
Treasure – No Approved Plan
Rosebud – No Approved Plan
Carbon – Low
Big Horn – No Approved Plan (map error- should be Medium)
Crow Reservation – Medium
Northern Cheyenne Reservation - No Approved Plan

The Crow Reservation is rated as medium risk because of slippage areas on roads and risk at Yellowtail Dam. A large seiche may develop if a landslide occurred at Yellowtail Dam (five to six miles in the area of Bull Elk). It was noted that national statistics indicate risks in Big Horn County.

Participants discussed frequency of risk versus magnitude. Should goals and strategies be historical damage statistics? Participants suggested that two maps be produced; one map for risk likelihood and one map for damage costs. Additionally, how should one prioritize hazards that can be mitigated? How is a risk equation calculated? Frequency should be considered but should mitigable hazards be factored into risk equation? If we can't mitigate a hazard, like a volcano, should we disregard this hazard?

It was also observed that the hazard maps show that Big Horn and the Crow Reservation do not always share the same risk rating. Shouldn't the county and reservation share the same rating?

Severe Thunderstorms, Hail, Wind and Tornadoes

Wheatland – Medium
Golden Valley – Medium
Musselshell – Medium
Stillwater – High
Yellowstone – High
Treasure – No Approved Plan
Rosebud – No Approved Plan
Carbon – Medium
Big Horn – High
Crow Reservation – Medium
Northern Cheyenne Reservation - No Approved Plan

No changes are needed.

Terrorism and Violence

Wheatland – Low
Golden Valley – Low
Musselshell – Low
Stillwater – Not Assessed
Yellowstone – Low

Treasure – No Approved Plan
Rosebud – No Approved Plan
Carbon – Not Assessed
Big Horn – Not Assessed
Crow Reservation – Low
Northern Cheyenne Reservation - No Approved Plan

Participants suggested that computer service continue during public health emergencies. Additionally, it was suggested that the Terrorism and Violence hazard continue to be included in local plans but in the future, emphasize the natural hazards, damages and personnel injuries that can result from this hazard. Additionally, can the State Plan include a section on Terrorism and Violence that addresses terrorist acts to the State IT structure? This is a COOP issue and needs to be discussed at the April 19th stakeholder meeting.

Volcanic Eruption

Wheatland – Not Assessed
Golden Valley – Not Assessed
Musselshell – Not Assessed
Stillwater – Low
Yellowstone – Low
Treasure – No Approved Plan
Rosebud – No Approved Plan
Carbon – Low
Big Horn – Low
Crow Reservation – Low
Northern Cheyenne Reservation - No Approved Plan

Participants suggested that the Volcanic Eruption hazard be rated the same for every county in the district.

Additionally, participants wondered why a hazard is identified if it can't be mitigated. The Update to the State Plan should clarify this so all the local jurisdictions can recognize a hazard but disregard it in their plans.

Wildfire

Wheatland – High
Golden Valley – High
Musselshell – High
Stillwater – High
Yellowstone – High
Treasure – No Approved Plan
Rosebud – No Approved Plan
Carbon – High
Big Horn – High
Crow Reservation – High

Northern Cheyenne Reservation - No Approved Plan

Participants noted that the risk map is good and that all counties are rated as high risk. It was wondered if the state reverse 911 system requires three alternatives for evacuation to be mapped in advance.

Winterstorms

Wheatland – High

Golden Valley – High

Musselshell – High

Stillwater – Change Medium to High

Yellowstone – Change Medium to High

Treasure – No Approved Plan

Rosebud – No Approved Plan

Carbon – High

Big Horn – High

Crow Reservation – High

Northern Cheyenne Reservation - No Approved Plan

Participants questioned why Stillwater and Yellowstone counties are rated as medium risk when the other counties are high risk. Is there a lack of shelters in rural counties compared to Yellowstone County and Billings? It was noted that losing power and heat can be serious in rural areas. Participants thought that all counties should be rated high for this hazard as winterstorm frequency is high although economic loss is fairly low. A severe winterstorm was defined as a storm that knocks out the power. Loss of power is an issue with the rural co-ops. Winterstorm risk can depend on the amount of public education. Yellowstone County has done a good job with public education but Rosebud County has not.

ASSESSMENT OF STATE GOALS – DISTRICT 5

Goal 1: Maximize the use of mitigation actions that prevent losses from all hazards.

Goal 2: Increase State’s capability to provide mitigation opportunities.

Change wording to “Assist locals with mitigation opportunities”.

Goal 3: Mitigate the potential loss of life and property from flooding.

Subdivision reviews, flooding and drainage are big issues. State DEQ or local floodplain administrator may help with these issues. Local areas need more guidance and support from the state on the “grey areas” of floodplain management and development. Locals need more training, support and technical assistance from the DNRC and DEQ (review storm drainage). Participants wondered if floodplain management should be consolidated with the State Disaster and Emergency Services.

Goal 4: Reduce the community impacts of wildland and rangeland fires.

Participants noted the same issue of increased State support applies to Wildland Urban Interface building.

Goal 5: Reduce potential earthquake losses in Western Montana.

Goal 6: Minimize economic impacts of drought.

Drought and fire should go together and they should be a higher goal priority than flooding.

Goal 7: Reduce impacts from severe winter weather.

Goal 8: Encourage mitigation of potentially devastating but historically less frequent hazards.

Make wind, hail and tornadoes a separate goal before Goal 8.

OTHER COMMENTS

State Plan needs to address state aid to locals with disasters and mitigation projects as there is poor communication between the State and locals. State objectives should be to work with locals by assisting with planning, achieving goals, and obtaining grants, etc.

Phrasing of State goals and objectives needs to emphasize that the State will assist locals with all hazards and mitigation. Additionally, the State will work with local jurisdictions in a partnership to achieve all the State goals.

Counties need to know what other local plans discuss. It was suggested that there be a link to each local plan in the Updated State Plan. Make the State PDM plan the “Yellow Book/Yellow Pages” for local jurisdictions to refer to for all emergencies, i.e., who is going to handle pandemic flu, the Point of Contact, etc. and refer to links.

Counties wondered if they should only evaluate their top three hazards but they were assured that they could assess all hazards they felt were a threat to their communities.

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STATEWIDE HAZARD ASSESSMENT**

On-Line Survey Results

What jurisdiction type do you represent?			
		Response Percent	Response Count
Federal	<div><div></div></div>	4.2%	1
State	<div><div></div></div>	8.3%	2
County	<div><div></div></div>	37.5%	9
Tribal	<div><div></div></div>	4.2%	1
Public Utility	<div><div></div></div>	4.2%	1
General Public	<div><div></div></div>	25.0%	6
Other (please specify)	<div><div></div></div>	20.8%	5
		answered question	24
		skipped question	0

What County/Tribal Community do you represent or as a private citizen where do you live?			
		Response Percent	Response Count
Blackfeet		0.0%	0
Crow		0.0%	0
Flathead		0.0%	0
Fort Belknap		0.0%	0
Fort Peck		0.0%	0
Northern Cheyenne		0.0%	0
Rocky Boy's		0.0%	0
Beaverhead		0.0%	0
Big Horn		0.0%	0
Blaine		0.0%	0
Broadwater		0.0%	0
Carbon	<div><div></div></div>	8.3%	2
Carter		0.0%	0
Cascade		0.0%	0
Chouteau		0.0%	0

Custer		0.0%	0
Daniels		0.0%	0
Dawson		0.0%	0
Deer Lodge		0.0%	0
Fallon		0.0%	0
Fergus		0.0%	0
Flathead		0.0%	0
Gallatin		0.0%	0
Garfield		0.0%	0
Glacier		0.0%	0
Golden Valley		0.0%	0
Granite		0.0%	0
Hill		0.0%	0
Jefferson		0.0%	0
Judith Basin		0.0%	0
Lake		0.0%	0
Lewis And Clark		0.0%	0
Liberty		0.0%	0
Lincoln		0.0%	0
Madison		0.0%	0
McCone		0.0%	0
Meagher		0.0%	0
Mineral		0.0%	0
Missoula		0.0%	0
Musselshell		8.3%	2
Park		0.0%	0
Petroleum		0.0%	0
Phillips		0.0%	0
Pondera		0.0%	0
Powder River		0.0%	0
Powell		0.0%	0

Prairie		0.0%	0
Ravalli		0.0%	0
Richland		0.0%	0
Roosevelt		0.0%	0
Rosebud		0.0%	0
Sanders		0.0%	0
Sheridan		0.0%	0
Silver Bow		0.0%	0
Stillwater	<div></div>	4.2%	1
Sweet Grass		0.0%	0
Teton		0.0%	0
Toole		0.0%	0
Treasure		0.0%	0
Valley		0.0%	0
Wheatland		0.0%	0
Wibaux		0.0%	0
Yellowstone	<div></div>	79.2%	19
Other		0.0%	0
	answered question		24
	skipped question		0

Have you seen or read the State of Montana Multi-Hazard Mitigation Plan and Statewide Hazard Assessment.			
		Response Percent	Response Count
Yes	<div></div>	29.2%	7
No	<div></div>	70.8%	17
	answered question		24
	skipped question		0

How would you rate the overall quality and content of the plan.			
		Response Percent	Response Count
1 - Poor	<div></div>	0.0%	0
2	<div></div>	0.0%	0
3 - Average	<div></div>	33.3%	2
4	<div></div>	50.0%	3
5 - Excellent	<div></div>	16.7%	1
		answered question	6
		skipped question	18

Do you feel the plan accurately portrays natural and man-made hazards in Montana?			
		Response Percent	Response Count
Yes	<div></div>	100.0%	6
No	<div></div>	0.0%	0
		answered question	6
		skipped question	18

What improvements do you think could be made to the plan?		
		Response Count
		4
	<i>answered question</i>	4
	<i>skipped question</i>	20

From the perspective of the jurisdiction that you represent or permanently reside in, how do you perceive the risk to each of the following hazards: Risk is defined as the potential to affect people, environment, economy and property of your jurisdiction. High/Medium/Low for:					
	High	Medium	Low	Rating Average	Response Count
Communicable Disease	19.0% (4)	47.6% (10)	33.3% (7)	2.14	21
Drought	85.7% (18)	9.5% (2)	4.8% (1)	1.19	21
Earthquake	5.0% (1)	35.0% (7)	60.0% (12)	2.55	20
Flooding/Dam Failure	19.0% (4)	52.4% (11)	28.6% (6)	2.10	21
Hazardous Material Incidents	38.1% (8)	57.1% (12)	4.8% (1)	1.67	21
Landslide	4.8% (1)	19.0% (4)	76.2% (16)	2.71	21
Terrorism/Violence	4.8% (1)	33.3% (7)	61.9% (13)	2.57	21
Thunderstorm Wind, Hail, and Tornadoes	61.9% (13)	38.1% (8)	0.0% (0)	1.38	21
Volcanic Eruption	0.0% (0)	9.5% (2)	90.5% (19)	2.90	21
Wildfire	76.2% (16)	19.0% (4)	4.8% (1)	1.29	21
Winter Storms/Avalanche	33.3% (7)	61.9% (13)	4.8% (1)	1.71	21
	answered question				21
	skipped question				3

Please comment on the impact that future development will have on the hazards listed from the perspective of your jurisdiction.			
		Response Percent	Response Count
Communicable Disease	<div><div></div></div>	77.8%	7
Drought	<div><div></div></div>	77.8%	7
Earthquake	<div><div></div></div>	77.8%	7
Flooding/Dam Failure	<div><div></div></div>	77.8%	7
Hazardous Material Incidents	<div><div></div></div>	77.8%	7
Landslide	<div><div></div></div>	66.7%	6
Terrorism/Violence	<div><div></div></div>	66.7%	6
Thunderstorm Wind, Hail, and Tornadoes	<div><div></div></div>	77.8%	7
Volcanic Eruption	<div><div></div></div>	66.7%	6
Wildfire	<div><div></div></div>	66.7%	6
Winter Storms/Avalanche	<div><div></div></div>	66.7%	6
	answered question		9
	skipped question		15

Please prioritize the following proposed NEW goals for the State Plan Update by order of importance from the perspective of your jurisdiction (1=highest / 10=lowest):											
	High				Medium					Low	Rating Average
Maximize the Use of Mitigation Actions that Prevent Losses from All Hazards	46.2% (6)	7.7% (1)	30.8% (4)	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	7.7% (1)	0.0% (0)	0.0% (0)	2.46
Increase State’s Capability to Provide and Assist Locals with Mitigation Opportunities	38.5% (5)	23.1% (3)	23.1% (3)	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	7.7% (1)	0.0% (0)	0.0% (0)	2.46
Reduce the Community Impacts of Wildland and Rangeland Fires	23.1% (3)	53.8% (7)	0.0% (0)	7.7% (1)	7.7% (1)	0.0% (0)	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	2.54
Mitigate the Potential Loss of Life and Property from Flooding (riverine flooding, ice jams, dam failure)	7.7% (1)	15.4% (2)	30.8% (4)	23.1% (3)	7.7% (1)	15.4% (2)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	3.54
Minimize Economic Impacts of Drought	7.7% (1)	30.8% (4)	23.1% (3)	7.7% (1)	7.7% (1)	7.7% (1)	7.7% (1)	7.7% (1)	0.0% (0)	0.0% (0)	3.69
Reduce Impacts from Severe Summer Weather (thunderstorm wind, hail, tornadoes)	0.0% (0)	16.7% (2)	8.3% (1)	0.0% (0)	41.7% (5)	16.7% (2)	0.0% (0)	16.7% (2)	0.0% (0)	0.0% (0)	5.00
Reduce Impacts from Severe Winter Weather (extreme cold, snow, ice)	0.0% (0)	23.1% (3)	0.0% (0)	15.4% (2)	23.1% (3)	30.8% (4)	7.7% (1)	0.0% (0)	0.0% (0)	0.0% (0)	4.62
Reduce Potential Earthquake Losses in Western Montana	0.0% (0)	0.0% (0)	0.0% (0)	23.1% (3)	15.4% (2)	0.0% (0)	23.1% (3)	15.4% (2)	7.7% (1)	15.4% (2)	6.77
Reduce Losses from Hazardous Material Incidents	0.0% (0)	23.1% (3)	7.7% (1)	23.1% (3)	23.1% (3)	15.4% (2)	0.0% (0)	0.0% (0)	7.7% (1)	0.0% (0)	4.38
Encourage Mitigation of Potentially Devastating but Historically Less Frequent Hazards	0.0% (0)	7.7% (1)	15.4% (2)	7.7% (1)	30.8% (4)	7.7% (1)	7.7% (1)	7.7% (1)	0.0% (0)	15.4% (2)	5.62
	answered question										
	skipped question										

Please indicate any additional Goals you think should be added to the State Plan.		
		Response Count
		2
	answered question	2
	skipped question	22

Goal: Maximize the use of mitigation actions that prevent losses from all hazards.												
	High				Medium					Low	Rating Average	
Develop GIS databases of hazard risk maps and state buildings and infrastructure to use in mitigation planning	25.0% (3)	25.0% (3)	16.7% (2)	16.7% (2)	8.3% (1)	8.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	2.83	
Conduct Level 1 HAZUS-MH analyses for all Montana counties	16.7% (2)	8.3% (1)	33.3% (4)	8.3% (1)	33.3% (4)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	3.33	
Improve Statewide HAZUS data	16.7% (2)	8.3% (1)	33.3% (4)	16.7% (2)	25.0% (3)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	3.25	
Determine GPS locations of all State buildings for detailed, non-public analysis	8.3% (1)	8.3% (1)	33.3% (4)	25.0% (3)	0.0% (0)	8.3% (1)	0.0% (0)	8.3% (1)	0.0% (0)	8.3% (1)	4.25	
Conduct a non-public hazard assessment that utilizes specific State building locations and infrastructure locations to be used for mitigation actions and homeland security purposes	8.3% (1)	16.7% (2)	25.0% (3)	25.0% (3)	8.3% (1)	0.0% (0)	8.3% (1)	0.0% (0)	0.0% (0)	8.3% (1)	4.00	
Promote earth science education of hazards in schools	9.1% (1)	0.0% (0)	9.1% (1)	27.3% (3)	27.3% (3)	9.1% (1)	0.0% (0)	0.0% (0)	9.1% (1)	9.1% (1)	5.09	
Conduct a Statewide warning capability assessment	25.0% (3)	25.0% (3)	8.3% (1)	8.3% (1)	16.7% (2)	8.3% (1)	0.0% (0)	8.3% (1)	0.0% (0)	0.0% (0)	3.33	
Develop a Statewide All-Hazard Emergency Alert System (EAS) plan	25.0% (3)	33.3% (4)	16.7% (2)	8.3% (1)	8.3% (1)	0.0% (0)	0.0% (0)	8.3% (1)	0.0% (0)	0.0% (0)	2.83	
Continuously improve hazard assessments and the associated evaluation of vulnerabilities from all hazards.	16.7% (2)	25.0% (3)	41.7% (5)	0.0% (0)	0.0% (0)	0.0% (0)	16.7% (2)	0.0% (0)	0.0% (0)	0.0% (0)	3.08	
Increase the public awareness of hazards	33.3% (4)	33.3% (4)	16.7% (2)	8.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	8.3% (1)	0.0% (0)	2.58	
Enable every citizen in Montana to receive critical warning information immediately no matter where he/she is	41.7% (5)	16.7% (2)	25.0% (3)	8.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)	8.3% (1)	0.0% (0)	0.0% (0)	2.50	
Increase readiness for the protection of life and property during an event	33.3% (4)	25.0% (3)	16.7% (2)	16.7% (2)	0.0% (0)	0.0% (0)	0.0% (0)	8.3% (1)	0.0% (0)	0.0% (0)	2.67	
	answered question											

	<i>skipped question</i>
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Please write-in any specific mitigation projects related to this goal you feel should be added to the plan.										
										Response Count
										2
	<i>answered question</i>									2
	<i>skipped question</i>									22

Goal: Increase State’s capability to provide and assist locals with mitigation opportunities.											
	High				Medium					Low	Rating Average
Continue outreach of mitigation project funding opportunities	25.0% (3)	25.0% (3)	16.7% (2)	16.7% (2)	8.3% (1)	0.0% (0)	0.0% (0)	8.3% (1)	0.0% (0)	0.0% (0)	3.00
Provide technical assistance with the environmental review process	9.1% (1)	27.3% (3)	9.1% (1)	27.3% (3)	18.2% (2)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	3.45
Provide technical assistance for project development	16.7% (2)	8.3% (1)	25.0% (3)	25.0% (3)	16.7% (2)	8.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	3.42
Create an electronic database of completed mitigation projects in Montana	25.0% (3)	0.0% (0)	0.0% (0)	33.3% (4)	16.7% (2)	8.3% (1)	8.3% (1)	0.0% (0)	8.3% (1)	0.0% (0)	4.25
Increase the scope and participation of the State Hazard Mitigation Team	16.7% (2)	8.3% (1)	25.0% (3)	8.3% (1)	16.7% (2)	8.3% (1)	16.7% (2)	0.0% (0)	0.0% (0)	0.0% (0)	3.92
Create a private advisory group for mitigation	0.0% (0)	0.0% (0)	25.0% (3)	16.7% (2)	25.0% (3)	8.3% (1)	8.3% (1)	0.0% (0)	0.0% (0)	16.7% (2)	5.42
Streamline mitigation standards in state and/or local subdivision regulations	8.3% (1)	16.7% (2)	25.0% (3)	16.7% (2)	16.7% (2)	8.3% (1)	8.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)	3.75
Strengthen state and/or local building codes	16.7% (2)	8.3% (1)	25.0% (3)	0.0% (0)	8.3% (1)	16.7% (2)	16.7% (2)	8.3% (1)	0.0% (0)	0.0% (0)	4.33
Require growth policies consider natural and man-made hazard	16.7% (2)	25.0% (3)	33.3% (4)	8.3% (1)	8.3% (1)	0.0% (0)	8.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)	3.00
Create a state funded grant program to assist with the 25% match for local governments	33.3% (4)	8.3% (1)	25.0% (3)	0.0% (0)	16.7% (2)	8.3% (1)	8.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)	3.17
Coordinate local plan development	25.0% (3)	16.7% (2)	33.3% (4)	8.3% (1)	8.3% (1)	8.3% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	2.83
Provide technical assistance with											

hazard mapping for rural communities without GIS capabilities	25.0% (3)	0.0% (0)	33.3% (4)	16.7% (2)	0.0% (0)	16.7% (2)	0.0% (0)	8.3% (1)	0.0% (0)	0.0% (0)	3.58
	answered question										
	skipped question										

Please write-in any specific mitigation projects related to this goal you feel should be added to the plan.											
											Response Count
											1
	answered question										1
	skipped question										23

Goal: Mitigate the potential loss of life and property from flooding.												
	High				Medium					Low	Rating Average	R
Develop and improve upon model floodplain ordinances for local governments	27.3% (3)	9.1% (1)	18.2% (2)	0.0% (0)	36.4% (4)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	3.45	
Develop mapping for unmapped flood prone areas	18.2% (2)	9.1% (1)	27.3% (3)	0.0% (0)	36.4% (4)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	3.64	
Update floodplain mapping of mapped areas	18.2% (2)	9.1% (1)	36.4% (4)	0.0% (0)	27.3% (3)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	3.45	
Establish a schedule for NFIP map reviews and updates	9.1% (1)	27.3% (3)	27.3% (3)	0.0% (0)	18.2% (2)	9.1% (1)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	3.55	
Provide outreach and technical assistance in joining the NFIP Community Rating System for reducing flood insurance premiums	18.2% (2)	9.1% (1)	27.3% (3)	18.2% (2)	18.2% (2)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	3.36	
Increase the public awareness of flood mitigation	27.3% (3)	18.2% (2)	18.2% (2)	0.0% (0)	27.3% (3)	0.0% (0)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	3.36	
Reduce the number of current and future structures in the floodplain	36.4% (4)	9.1% (1)	18.2% (2)	9.1% (1)	18.2% (2)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	2.91	
Prevent flooding of structures and infrastructure from inadequate storm drainage and poorly designed irrigation waterways	27.3% (3)	0.0% (0)	36.4% (4)	0.0% (0)	27.3% (3)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	3.36	
Provide adequate warning of flooding events	27.3% (3)	9.1% (1)	45.5% (5)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	9.1% (1)	3.18	

	<i>answered question</i>	
	<i>skipped question</i>	

Please write-in any specific mitigation projects related to this goal you feel should be added to the plan.		
		Response Count
		1
	<i>answered question</i>	1
	<i>skipped question</i>	23

Goal: Reduce the community impacts of wildland and rangeland fires.												
	High				Medium					Low	Rating Average	R
Reduce fuels in the wildland urban interface	45.5% (5)	0.0% (0)	36.4% (4)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	2.73	
Reduce hazardous fuels in rangeland areas	18.2% (2)	0.0% (0)	45.5% (5)	0.0% (0)	27.3% (3)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	3.64	
Accurately assess and address the current wildland urban interface problems at the subdivision level	45.5% (5)	18.2% (2)	18.2% (2)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	2.55	
Enhance firefighting resources and improve firefighting capabilities	36.4% (4)	27.3% (3)	9.1% (1)	9.1% (1)	9.1% (1)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	2.73	
Enhance community awareness of wildfires through education	36.4% (4)	27.3% (3)	18.2% (2)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	2.64	
Enhance effectiveness of response and evacuation	27.3% (3)	27.3% (3)	27.3% (3)	9.1% (1)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	2.64	
Establish mapping or record keeping practices to support fuel management strategies	27.3% (3)	0.0% (0)	36.4% (4)	9.1% (1)	18.2% (2)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	3.27	
Minimize human-caused ignition sources in fire-prone areas	36.4% (4)	27.3% (3)	18.2% (2)	0.0% (0)	9.1% (1)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	2.55	
Centralize fire history documentation	9.1% (1)	36.4% (4)	0.0% (0)	9.1% (1)	27.3% (3)	9.1% (1)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	3.73	
Develop a consistent Statewide fire risk assessment system	9.1% (1)	36.4% (4)	18.2% (2)	18.2% (2)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	9.1% (1)	3.64	
Encourage sustainable growth in wildland fire hazard areas	27.3% (3)	27.3% (3)	0.0% (0)	18.2% (2)	0.0% (0)	9.1% (1)	9.1% (1)	0.0% (0)	0.0% (0)	9.1% (1)	3.64	

	<i>answered question</i>	
	<i>skipped question</i>	

Please write-in any specific mitigation projects related to this goal you feel should be added to the plan.		
		Response Count
		1
	<i>answered question</i>	1
	<i>skipped question</i>	23

Goal: Reduce potential earthquake losses in Western Montana.											
	High				Medium					Low	Rating Average
Goal: Reduce potential earthquake losses in Western Montana.	9.1% (1)	0.0% (0)	27.3% (3)	0.0% (0)	27.3% (3)	0.0% (0)	18.2% (2)	0.0% (0)	0.0% (0)	18.2% (2)	5.36
Provide greater enforcement of current building codes	18.2% (2)	9.1% (1)	36.4% (4)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	18.2% (2)	4.45
Develop model seismic building codes	9.1% (1)	0.0% (0)	54.5% (6)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	18.2% (2)	4.73
Create stronger building standards for critical facilities and structures housing vulnerable populations	18.2% (2)	9.1% (1)	36.4% (4)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	18.2% (2)	4.45
Require earthquake drills in schools in Western Montana	18.2% (2)	9.1% (1)	18.2% (2)	9.1% (1)	18.2% (2)	0.0% (0)	0.0% (0)	0.0% (0)	9.1% (1)	18.2% (2)	4.82
Expand and upgrade earthquake monitoring network and reporting capabilities	10.0% (1)	20.0% (2)	20.0% (2)	0.0% (0)	30.0% (3)	0.0% (0)	10.0% (1)	0.0% (0)	0.0% (0)	10.0% (1)	4.30
Continue “Earthquake Preparedness Month” outreach activities during the month of October	0.0% (0)	9.1% (1)	18.2% (2)	27.3% (3)	18.2% (2)	0.0% (0)	0.0% (0)	0.0% (0)	9.1% (1)	18.2% (2)	5.36
Implement non-structural mitigation projects to harden State and community infrastructure from seismic hazards	0.0% (0)	9.1% (1)	27.3% (3)	18.2% (2)	18.2% (2)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	18.2% (2)	5.09
Seismically retrofit existing critical facilities and government assets	18.2% (2)	9.1% (1)	18.2% (2)	9.1% (1)	18.2% (2)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	18.2% (2)	4.64
	<i>answered question</i>										

skipped question											
Please write-in any specific mitigation projects related to this goal you feel should be added to the plan.											
											Response Count
											1
answered question											1
skipped question											23

Goal: Minimize economic impacts of drought.												
	High				Medium					Low	Rating Average	Re
Develop a system for distributing information on current conditions	27.3% (3)	0.0% (0)	27.3% (3)	9.1% (1)	27.3% (3)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	3.45	
Continue to support the State Drought Advisory Committee	18.2% (2)	0.0% (0)	27.3% (3)	9.1% (1)	36.4% (4)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	3.91	
Install Statewide drought monitoring stations	27.3% (3)	0.0% (0)	9.1% (1)	27.3% (3)	27.3% (3)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	3.55	
Use long-term groundwater monitoring to assess drought conditions	27.3% (3)	0.0% (0)	27.3% (3)	18.2% (2)	18.2% (2)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	3.27	
Educate farmers and ranchers in fiscally preventing drought losses	27.3% (3)	9.1% (1)	36.4% (4)	0.0% (0)	18.2% (2)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	3.09	
Educate farmers and ranchers in reducing physical losses during dry seasons	27.3% (3)	9.1% (1)	45.5% (5)	0.0% (0)	9.1% (1)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	2.91	
Identify water retention projects that could lessen the effects of drought	27.3% (3)	27.3% (3)	18.2% (2)	0.0% (0)	18.2% (2)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	3.00	
	answered question											
	skipped question											

Please write-in any specific mitigation projects related to this goal you feel should be added to the plan.											
											Response Count
											3
	answered question										3
	skipped question										21

Goal: Reduce impacts from severe winter weather.												
	High				Medium					Low	Rating Average	R
Distribute winter driving and survival tips	9.1% (1)	18.2% (2)	18.2% (2)	0.0% (0)	45.5% (5)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	4.00	
Increase public awareness of winter weather hazards	18.2% (2)	9.1% (1)	18.2% (2)	18.2% (2)	27.3% (3)	0.0% (0)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	3.82	
Create partnerships with utility companies and negotiate for shorten span distances between power poles to better withstand snow loads and severe storms	9.1% (1)	18.2% (2)	18.2% (2)	9.1% (1)	18.2% (2)	9.1% (1)	0.0% (0)	9.1% (1)	0.0% (0)	9.1% (1)	4.45	
Improve communication between emergency response personnel and road departments to facilitate coordination during extreme weather	27.3% (3)	18.2% (2)	36.4% (4)	0.0% (0)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	9.1% (1)	3.27	
Structurally analyze all buildings or rooms identified as shelters and strengthen these as necessary	18.2% (2)	0.0% (0)	27.3% (3)	18.2% (2)	27.3% (3)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	3.64	
	answered question											
	skipped question											

Please write-in any specific mitigation projects related to this goal you feel should be added to the plan.											
											Response Count
											2
	answered question										2
	skipped question										22

Goal: Reduce impacts from Severe Summer Weather (thunderstorms, wind, hail, tornadoes)												
	High				Medium					Low	Rating Average	R
Install safety film on critical facilities to prevent shattering glass.	9.1% (1)	18.2% (2)	9.1% (1)	18.2% (2)	27.3% (3)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	9.1% (1)	4.27	
Encourage development and enforcement of wind resistant buildings and construction codes	9.1% (1)	18.2% (2)	9.1% (1)	18.2% (2)	27.3% (3)	0.0% (0)	9.1% (1)	9.1% (1)	0.0% (0)	0.0% (0)	4.18	
Develop and implement programs to keep trees from threatening lives, property and public infrastructure during windstorm events	9.1% (1)	9.1% (1)	18.2% (2)	27.3% (3)	0.0% (0)	9.1% (1)	9.1% (1)	0.0% (0)	0.0% (0)	18.2% (2)	4.91	
	answered question											
	skipped question											

Please write-in any specific mitigation projects related to this goal you feel should be added to the plan.		
		Response Count
		1
	answered question	1
	skipped question	23

Goal: Reduce losses from Hazardous Material Incidents												
	High				Medium					Low	Rating Average	R
Develop communication plan for hazardous material emergencies	45.5% (5)	9.1% (1)	27.3% (3)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	2.73	
Enhance information capability on types of hazardous materials traveling transportation routes	18.2% (2)	18.2% (2)	27.3% (3)	18.2% (2)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	3.36	
Provide hazardous material training to emergency responders	27.3% (3)	45.5% (5)	0.0% (0)	0.0% (0)	18.2% (2)	0.0% (0)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	2.91	
Develop evacuation procedures for homes near transportation networks that commonly carry hazardous materials	36.4% (4)	36.4% (4)	9.1% (1)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)	9.1% (1)	2.64	
	answered question											
	skipped question											

Please write-in any specific mitigation projects related to this goal you feel should be added to the plan.		
		Response Count
		1
	answered question	1
	skipped question	23

Goal: Encourage mitigation of potentially devastating but historically less frequent hazards.											
	High				Medium					Low	Rating Average
Identify and map areas of greatest landslide and avalanche potential	9.1% (1)	9.1% (1)	9.1% (1)	9.1% (1)	27.3% (3)	9.1% (1)	0.0% (0)	0.0% (0)	0.0% (0)	27.3% (3)	5.55
Create a landslide/avalanche technical committee	0.0% (0)	0.0% (0)	18.2% (2)	9.1% (1)	9.1% (1)	9.1% (1)	9.1% (1)	9.1% (1)	0.0% (0)	36.4% (4)	6.91
Support the mitigation related goals, objectives, and actions of the Montana Homeland Security Strategic Plan	9.1% (1)	0.0% (0)	18.2% (2)	18.2% (2)	18.2% (2)	0.0% (0)	18.2% (2)	0.0% (0)	0.0% (0)	18.2% (2)	5.36
Reduce losses from communicable disease	18.2% (2)	9.1% (1)	18.2% (2)	0.0% (0)	27.3% (3)	18.2% (2)	0.0% (0)	0.0% (0)	0.0% (0)	9.1% (1)	4.27
Increase awareness of risks from communicable disease	18.2% (2)	18.2% (2)	18.2% (2)	0.0% (0)	36.4% (4)	0.0% (0)	0.0% (0)	9.1% (1)	0.0% (0)	0.0% (0)	3.64
	answered question										
	skipped question										

Please write-in any specific mitigation projects related to this goal you feel should be added to the plan.		
		Response Count
		1
	answered question	1
	skipped question	23

Please indicate how long it took you to complete the survey.			
		Response Percent	Response Count
5 minutes		0.0%	0
10 minutes	<div></div>	20.0%	2
15 minutes	<div></div>	30.0%	3
20 minutes	<div></div>	40.0%	4
30 minutes	<div></div>	10.0%	1
Greater than 30 minutes		0.0%	0
	answered question		10
	skipped question		14

DISTRICT 5 ON-LINE SURVEY - OTHER JURISDICTIONS COMPLETING SURVEY

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 Find	2. American Red Cross	Thu, 5/24/07 10:59 AM
 Find	3. City	Thu, 5/24/07 10:44 AM
 Find	4. City of Billings	Thu, 5/24/07 8:46 AM
 Find	5. municipal	Thu, 5/24/07 6:40 AM
		10 responses per page 

District 5 On-Line Survey - Suggested Improvements to State Plan

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Comment Text		Response Date
 Find	1. Mitigations should link to counties by providing state support to them for their mitigation efforts. All disasters are local.	Tue, 6/5/07 8:47 PM
 Find	2. Some hazards identified in specific portions of the state may be over emphasized in terms of the real threat they create in a given jurisdiction. Also, some very specific threats are large in magnitude if they occur, but almost never occur or have a very low probability of occurring. For example, failure of the Yellowtail Dam in Big Horn County, or devastating earthquake in the City of Billings.	Thu, 5/24/07 8:50 AM
 Find	3. None	Thu, 5/24/07 6:38 AM
 Find	4. /	Wed, 5/23/07 3:36 PM
		10 responses per page 

District 5 On-Line Survey - Suggested New Goals

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Comment Text		Response Date
 Find	1. I think the state plan needs to address emergency preparedness and disaster management for vulnerable populations, like home bound elders, or assist the agencies serving these individuals. Big Sky Senior Services, Inc.(BSSS) serves low-income seniors. We were told by local emergency services providers that they would be unable to assist individuals, should a disaster occur. BSSS in Billings is attempting to assure these individuals' safety, but we are severely hampered by a lack of resources. We have learned from Katrina that disasters are a matter of life or death, especially for vulnerable populations. It is vital to find a way to provide services to keep these individuals safe during a disaster.	Thu, 5/24/07 8:44 AM
 Find	2. None	Thu, 5/24/07 6:42 AM

10 responses per page 

District 5 On-Line Survey - Other Goals 1 Mitigation Projects

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Comment Text		Response Date
 Find	1. Ensure seamless communication between all law enforcement and public safety agencies at the local, regional and state level. This should be done immediately as it is often the biggest issue when a disaster strikes and is one of the most basic issues that should be resolved.	Thu, 5/24/07 9:03 AM
 Find	2. None	Thu, 5/24/07 6:46 AM
		10 responses per page 

District 5 On-Line Survey - Other Severe Winter Weather Mitigation Projects

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Comment Text		Response Date
 Find	1. Identify and develop evacuation procedures for individuals, who cannot survive during a power outage, such as people on oxygen, ventilators,etc.	Thu, 5/24/07 8:54 AM
 Find	2. None	Thu, 5/24/07 6:54 AM
		10 responses per page 

District 5 On-Line Survey - Other Drought Mitigation Projects

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Comment Text		Response Date
 Find	1. Conservation of water use is the single most effective way of handling drought. All municipalities in Monatana should be employing water conservation methods and counties should also have water management programs. No one has a right to use all the water they want. If we conserved water use in MOntana like many other states, we would not have the all of the drought problems we do and we would delay millions of dollars in infrastructure upgrades and new conatruction that is only needed because of high water demands.	Thu, 5/24/07 9:10 AM
 Find	2. Educate individual citizens, especially homeowners, about year-round water conservation. Provide incentives for used water recycling systems and rain water collection systems.	Thu, 5/24/07 8:54 AM
 Find	3. None	Thu, 5/24/07 6:54 AM
		10 responses per page 

District 5 On-Line Survey-Impact of Future Development on Communicable Disease Hazard

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Comment Text		Response Date
 Find	1. low impact	Wed, 6/20/07 12:58 PM
 Find	2. All factors increase in importance as population increases	Tue, 6/5/07 8:50 PM
 Find	3. influx of more people will increase the risk.	Tue, 5/29/07 9:20 AM
 Find	4. increasing potential	Fri, 5/25/07 2:05 PM
 Find	5. Larger population, more people could be affected	Thu, 5/24/07 8:55 AM
 Find	6. None	Thu, 5/24/07 6:40 AM
 Find	7. more people-more disease chances	Wed, 5/23/07 3:41 PM
		10 responses per page 

District 5 On-Line Survey-Impact of Future Development on Drought Hazard

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Comment Text		Response Date
 Find	1. none	Wed, 6/20/07 12:58 PM
 Find	2. the demand for water will increase with future development.	Tue, 5/29/07 9:20 AM
 Find	3. more fires	Fri, 5/25/07 2:05 PM
 Find	4. More paved areas cause higher temperatures. This creates heat islands near the city and increases the drought potential.	Thu, 5/24/07 9:19 AM
 Find	5. Significant	Thu, 5/24/07 8:55 AM
 Find	6. None	Thu, 5/24/07 6:40 AM
 Find	7. lack of drinking water, ag community distress	Wed, 5/23/07 3:41 PM
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District 5 On-Line Survey-Impact of Future Development on Earthquake Hazard

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Comment Text		Response Date
 Find	1. none	Wed, 6/20/07 12:58 PM
 Find	2. minimal	Fri, 5/25/07 2:05 PM
 Find	3. A remote possibility, but could cause great destruction. Development would raise the potential for destruction, but should not be a determining factor.	Thu, 5/24/07 9:19 AM
 Find	4. Signifant impact on all development	Thu, 5/24/07 8:55 AM
 Find	5. Widespread damage	Thu, 5/24/07 7:30 AM
 Find	6. Minor	Thu, 5/24/07 6:40 AM
 Find	7. communities(housing and infrastructure) are not build to withstand earthquakes	Wed, 5/23/07 3:41 PM
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District 5 On-Line Survey-Impact of Future Development on Flooding Hazard

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Comment Text		Response Date
 Find	1. high	Wed, 6/20/07 12:58 PM
 Find	2. increasing potential for problems	Fri, 5/25/07 2:05 PM
 Find	3. More regulation and inspection needed for dams. Flooding is a distinct possibility and our dams should be held to a high standard.	Thu, 5/24/07 9:19 AM
 Find	4. Significant depending on location	Thu, 5/24/07 8:55 AM
 Find	5. Displacement of residents	Thu, 5/24/07 7:30 AM
 Find	6. None	Thu, 5/24/07 6:40 AM
 Find	7. more change of damage as development increases	Wed, 5/23/07 3:41 PM
		10 responses per page 

District 5 On-Line Survey-Impact of Future Development on Hazardous Material Incidents









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Comment Text		Response Date
 Find	1. high	Wed, 6/20/07 12:58 PM
 Find	2. increasing potential for incidents	Fri, 5/25/07 2:05 PM
 Find	3. Major truck and rail traffic goes through our area. Inspection and regulation is imperative.	Thu, 5/24/07 9:19 AM
 Find	4. Depends on new highway routes and location of new development. Low at this time.	Thu, 5/24/07 8:55 AM
 Find	5. Major disruption	Thu, 5/24/07 7:30 AM
 Find	6. Minor	Thu, 5/24/07 6:40 AM
 Find	7. great potential for problems with rail traffic , refineries, and businesses	Wed, 5/23/07 3:41 PM
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District 5 On-Line Survey-Impact of Future Development on Landslide Hazard

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Comment Text		Response Date
 Find	1. none	Wed, 6/20/07 12:58 PM
 Find	2. increasing potential for problems	Fri, 5/25/07 2:05 PM
 Find	3. Not common in Yellowstone County, but other areas of the state have great potential for this. CA should serve as an example of why development is not logical in areas prone to landslides.	Thu, 5/24/07 9:19 AM
 Find	4. Minor impact	Thu, 5/24/07 8:55 AM
 Find	5. None	Thu, 5/24/07 6:40 AM
 Find	6. depends on where development occurs	Wed, 5/23/07 3:41 PM
		10 responses per page 

District 5 On-Line Survey-Impact of Future Development on Severe Summer Weather Hazards

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Comment Text		Response Date
 Find	1. medium	Wed, 6/20/07 12:58 PM
 Find	2. minimal	Fri, 5/25/07 2:05 PM
 Find	3. These are common. A working warning system is necessary, as well as shelters, etc. Education on steps to protect property and people is needed. A plan to assist in clean-up and recovery needed.	Thu, 5/24/07 9:19 AM
 Find	4. Impact will be significant whether new development occurs or not	Thu, 5/24/07 8:55 AM
 Find	5. Major disruption	Thu, 5/24/07 7:30 AM
 Find	6. None	Thu, 5/24/07 6:40 AM
 Find	7. more development, more potential damage	Wed, 5/23/07 3:41 PM
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District 5 On-Line Survey-Impact of Future Development on Terrorism Hazard

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Comment Text		Response Date
 Find	1. none	Wed, 6/20/07 12:58 PM
 Find	2. minimal	Fri, 5/25/07 2:05 PM
 Find	3. With three refineries, this is a possibility. Training in security is essential.	Thu, 5/24/07 9:19 AM
 Find	4. Minor to non existent impact	Thu, 5/24/07 8:55 AM
 Find	5. Minor	Thu, 5/24/07 6:40 AM
 Find	6. as the largest city in MT and the rail and pipeline activity, this is a risk	Wed, 5/23/07 3:41 PM
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District 5 On-Line Survey-Impact of Future Development on Volcanic Eruption Hazard

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Comment Text		Response Date
 Find	1. none	Wed, 6/20/07 12:58 PM
 Find	2. none	Fri, 5/25/07 2:05 PM
 Find	3. Not likely, but plans to assist victims should be in place.	Thu, 5/24/07 9:19 AM
 Find	4. Very unlikely. Potentially catastrophic if Yellowstone caldera were to erupt	Thu, 5/24/07 8:55 AM
 Find	5. None	Thu, 5/24/07 6:40 AM
 Find	6. Low risk, but would be wide spread damage	Wed, 5/23/07 3:41 PM
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District 5 On-Line Survey-Impact of Future Development on Wildfire Hazard

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Comment Text		Response Date
 Find	1. medium	Wed, 6/20/07 12:58 PM
 Find	2. increasing potential for problems	Fri, 5/25/07 2:05 PM
 Find	3. A major problem in this area. Development in high risk areas is asking for trouble - like Rehberg Estates!	Thu, 5/24/07 9:19 AM
 Find	4. Significant threat as new development encroaches into grasslands and forested areas and water supply is minimal to non-existent	Thu, 5/24/07 8:55 AM
 Find	5. Significant	Thu, 5/24/07 6:40 AM
 Find	6. high risk as people keep building in the wildland urban interface	Wed, 5/23/07 3:41 PM
		10 responses per page 

District 5 On-Line Survey-Impact of Future Development on Severe Winter Weather Hazards

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Comment Text		Response Date
 Find	1. medium	Wed, 6/20/07 12:58 PM
 Find	2. minimal	Fri, 5/25/07 2:05 PM
 Find	3. Development brings more people, so plans for mobility are needed. Snow emergency routes, shelters, etc.	Thu, 5/24/07 9:19 AM
 Find	4. Moderate impact except for outlying development that is reliant on vehicle travel to access services	Thu, 5/24/07 8:55 AM
 Find	5. Minor	Thu, 5/24/07 6:40 AM
 Find	6. more people = more problems	Wed, 5/23/07 3:41 PM
		10 responses per page 

**2007 UPDATE TO THE STATE OF MONTANA
MULTI-HAZARD MITIGATION PLAN AND
STATEWIDE HAZARD ASSESSMENT**

Mitigation Projects

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 1 - Maximize the use of mitigation actions that prevent losses from all hazards.

OBJECTIVE 1.1 - Increase readiness for the protection of life and property during an event.

Big Horn County

High Priority

- Qualify the county as a NOAA storm-ready community.
- Identify mechanism for safety response at major events, like Crow Fair.
- Public information on importance of NOAA weather radios.
- Develop an evacuation plan, including identification of local evacuation shelter in Lodge Grass.
- Ensure critical facilities have working NOAA radios.
- Address need for another water storage tower in Lodge Grass.
- Identify emergency safe shelters.
- Continue training/drill exercises, including for evacuations, and expand as necessary.

Medium Priority

- Review and update as necessary emergency response procedures for various disasters in public places.
- Continue to provide for livestock and animals in emergency response plans.
- NOAA radio coverage to all Big Horn County communities.

Low Priority

- Identify sources of assistance for NOAA weather radio acquisition, as necessary.
- Create community emergency response teams.

Crow Reservation

High Priority

- Expand FTE as needed to provide adequate staffing for DES functions.
- Find a neutral site to continue training exercises with other responders.
- Develop back-up plans for when repeaters go "down".
- Work to ensure existing repeaters are addressed as priorities for operation, maintenance and protection from disaster events.
- Implement the centralized dispatch system being developed on the Crow Reservation.
- Attract and retain volunteers for the Volunteer Fire Dept.
- Continue to work with major events (such as Crow Fair) to identify evacuation routes, best ways of providing emergency services, identifying emergency shelters.
- Continue ICS training and coordination.
- Develop policy and methods for first response among the variety of agencies for specific types of disasters. Identify lead agency and back up for each type of disaster and clarify their role.
- Draft Memoranda of Understanding regarding coordination of emergencies.
- Share final EOP with other responders (e.g., Big Horn County, Yellowstone County, BIA, National Park Service).
- Identify need and location for any new repeaters and work to install as necessary.
- Work with TERC to prioritize DES staff time.
- Assess time needed by DES Coordinator to fulfill various tasks in the PDM Plan as well as regular ongoing duties.
- Finalize and adopt the Crow Tribe Emergency Operations Plan. The Plan will identify location(s) of emergency operations center and make provision for adequacy.

Medium Priority

- Identify sources and process for obtaining food and supplies until the Red Cross can arrive with their support. Coordinate with local grocery store.
- Have emergency responders for ambulance based 24 hours per day in Lodge Grass.
- Coordinate with various responders to develop a system to ensure ability to communicate with each other and avoid situations that create confusion.
- Continue to upgrade equipment (e.g., radios) as needed.
- Continue to participate in the Big Sky 11 Consortium as part of the overall Interoperability Montana project.

Golden Valley County

High Priority

- Obtain generator for repeater site.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 1 - Maximize the use of mitigation actions that prevent losses from all hazards.

OBJECTIVE 1.1 - Increase readiness for the protection of life and property during an event.

Golden Valley County

Medium Priority

- Obtain portable repeater that could be used in Snowy Mountain to north and Broadview area where current communication is poor.
- Obtain backup generator for courthouse to support emergency communications.
- Obtain new ambulances for Ryegate and Lavina.
- Obtain mobile generator to use at Golden Valley County courthouse and other critical facilities.
- Install pigtail connections at county critical facilities for mobile generator.

Musselshell County

High Priority

- Upgrade radio communications at the dispatch center to become P-25 compliant.
- Upgrade radio communications for responders to communicate with mutual aid responding units and become P-25 compliant.
- Obtain generator for Emergency Operations Center
- Obtain generators for all repeater sites.
- Develop and enhance Citizens Corp Council.

Medium Priority

- Provide CERT training for the community volunteers on Citizens Corp Council.
- Obtain portable repeater to enhance communications within the County.

Northern Cheyenne Reservation

High Priority

- Develop systems and infrastructure to respond to emergencies and identify an Emergency Operations Center.
- Regularly conduct training exercises, including table-top and field test exercises for various disaster scenarios and evacuations.
- DES Coordinator will lead TERC in annual review of progress on PDM goals and objectives, assessment of next tasks necessary to accomplish goals.
- Develop and maintain an active Tribal Emergency Response Committee that is led and motivated by the DES Coordinator.
- Ensure the DES Coordinator is the active coordinator of various disaster-related activities among the various tribal departments.
- Hire a DES Coordinator and ensure the coordinator has direct line of communication with the Tribal President and Council.
- Identify evacuation routes for various types of disasters, including hazardous materials.

Medium Priority

- Develop systems for distributing emergency supplies and for their collection after the disaster.

Rosebud County

High Priority

- Purchase and install NOAA Weather Radios for critical and special needs facilities.
- Educate critical and special needs facility users on the operation of NOAA Weather Radios.
- Provide information on the different types of statements that may be issued over NOAA Weather Radio.
- Regularly test and maintain NOAA Weather Radios at critical and special needs facilities.

Medium Priority

- Install emergency generators at critical and special needs facilities.
- Regularly test and maintain generators at critical and special needs facilities.
- Improve communications and coordination between Rosebud County and the City of Colstrip for emergency planning.
- Plan for and purchase needed emergency response equipment, emergency communications equipment and vehicles.
- Establish a Colstrip Emergency Operations Center.
- Develop sheltering and other emergency plans specific to the City of Colstrip.
- Improve volunteer recruitment and retention efforts in the City of Colstrip.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 1 - Maximize the use of mitigation actions that prevent losses from all hazards.

OBJECTIVE 1.1 - Increase readiness for the protection of life and property during an event.

Rosebud County

Low Priority

- Develop partnerships with area medical facilities, doctors and veterinarians.
- Develop a surveillance and communications program for tracking communicable disease and water and air contamination.

Treasure County

High Priority

- Host National Weather Service Skywarn training at least once every two years.

Medium Priority

- Educate critical and special needs facility users on the operation of NOAA Weather Radios.
- Purchase and install NOAA Weather Radios for critical and special needs facilities.
- Regularly test and maintain NOAA Weather Radios at critical and special needs facilities.
- Regularly test and maintain generators at critical and special needs facilities.
- Provide information on the different types of statements that may be issued over NOAA Weather Radio.
- Purchase and install a NOAA Weather Radio Transmitter in Hysham.
- Install emergency generators at critical and special needs facilities.

Low Priority

- Construct a facility in Hysham that serves as a community tornado shelter, particularly for those without basements or a sturdy structure, and has a generator to heat and shelter residents, particularly special needs populations, during a power outage.
- Regularly test the community shelter facility with tornado drills and generator tests.
- Regularly test the community shelter facility for disaster exercises and training during non-emergencies.

Wheatland County

High Priority

- Obtain better ambulance for Judith Gap.
- Recruit and provide training for volunteer response personnel.
- Increase involvement of LEPC in all communities.

Medium Priority

- Negotiate for better cell coverage in county.
- Employ full time emergency medical technicians in Harlowton.
- Install an emergency call box in Shawmut.

Yellowstone County

Medium Priority

- Develop countywide building district.
- Rural communication systems.
- Develop emergency shelters.
- Special population emergency planning.

Low Priority

- Animals in disaster.
- Safety window film installation.

OBJECTIVE 1.2 - Enable every citizen in Montana to receive critical warning information immediately no matter where he/she is.

Big Horn County

High Priority

- Regularly release information about disaster warning systems.

Crow Reservation

High Priority

- Work to have NOAA weather radios in all critical facilities.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 1 - Maximize the use of mitigation actions that prevent losses from all hazards.

OBJECTIVE 1.2 - Enable every citizen in Montana to receive critical warning information immediately no matter where he/she is.

Crow Reservation

High Priority

- Communicate with local radio stations to get notices out regarding severe weather, road conditions, emergencies, etc.

Golden Valley County

Medium Priority

- Obtain sirens for towns of Ryegate and Lavina.
- Implement reverse 911 system for all areas within the county.

Musselshell County

High Priority

- Consider short-wave radio system for emergency communications.
- Implement reverse 911 system.
- Install communication tower at airport.

Medium Priority

- Rebroadcast NOAA weather alerts on local radio station.

Northern Cheyenne Reservation

High Priority

- Continue to participate in the Big Sky 11 Interoperability project (communications among various emergency service providers/systems and jurisdictions in the area).
- Improve cell phone coverage on the Reservation.
- Improve capabilities to forecast weather events and provide warning notifications to the public by obtaining NOAA weather radio reception in Lame Deer.
- Work with critical facilities and public building occupants to ensure each has working NOAA weather radios.
- Identify existing warning systems (such as sirens in Birney and Magic City) and resources (such as the telephones in the water pump houses). Identify inefficiencies and needed improvements and implement.
- Improve communication with Birney.

Rosebud County

High Priority

- Encourage the public to purchase NOAA Weather Radios for their homes.

Medium Priority

- Purchase and integrate a Reverse 911 system into Enhanced 911.
- Identify and contact special needs populations, including those unable to evacuate or receive warnings, throughout the county.
- Create a database of special needs populations through an enrollment program.
- Map the locations of those with special needs and their associated needs.
- Periodically test and evaluate the Reverse 911 system.

Treasure County

Medium Priority

- Periodically test and evaluate the siren.
- Purchase and integrate a Reverse 911 system into Enhanced 911.
- Periodically test and evaluate the Reverse 911 system.
- Encourage the public to purchase NOAA Weather Radios for their homes.
- Evaluate and upgrade the warning siren in Hysham.

Yellowstone County

Medium Priority

- Alerting system expansion.
- Public alerting system maintenance and upgrade.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 1 - Maximize the use of mitigation actions that prevent losses from all hazards.

OBJECTIVE 1.3 - Increase the public awareness of hazards.

Big Horn County

High Priority

- Work with school systems on disaster prevention and education projects.
- Public education on preparing and responding to disasters.

Medium Priority

- Disaster Preparedness for occupants of mobile homes.
- Prepare disaster preparedness information for medically at-risk, isolated rural residents, etc.
- Identify and publicize snow routes.
- Public education on protecting livestock and animals during disasters.
- Monthly news releases focusing on a particular disaster type.
- Update publication that provides basic information on hazards in Big Horn County.

Low Priority

- Information to potential and existing homeowners about winter road conditions and other factors that can affect disaster response in winter storm conditions.
- Monitor/evaluate dispatch and coordinate dispatcher training and public education as necessary.

Crow Reservation

Medium Priority

- Provide public information through a variety of methods on how to prepare and respond to a variety of potential disasters and emergencies.

Golden Valley County

High Priority

- Increase public awareness of risk reduction at 4H and County Fairs.
- Identify awareness through the media of emergency shelter locations.

Musselshell County

Medium Priority

- Provide public awareness on location of emergency shelters.

Northern Cheyenne Reservation

Medium Priority

- Provide education and training for the public regarding how to prepare for serious weather and other disaster types.

Rosebud County

High Priority

- Conduct a public education program to encourage individuals and businesses to prepare disaster supplies kits.

Medium Priority

- Educate the public on the benefits of Reverse 911.

Treasure County

Medium Priority

- Educate the public on the siren tones and the desired personal protective actions.
- Educate the public on the benefits of Reverse 911.
- Conduct a public education program to encourage individuals and businesses to prepare disaster supplies kits.

Wheatland County

Medium Priority

- Identify and educate public on location of emergency shelters.

Yellowstone County

Medium Priority

- Develop school safety education.
- Increase weather awareness.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 1 - Maximize the use of mitigation actions that prevent losses from all hazards.

OBJECTIVE 1.4 - Continuously improve hazard assessments and the associated evaluation of vulnerabilities from all hazards.

Big Horn County

High Priority

- Long-term needs for technical assistance in Lodge Grass.
- Continue to update emergency resource guide and inventory.
- Regularly assess communications capabilities and address needed changes/improvements, as necessary.
- Address back-up power supply needs of Lodge Grass, starting with refurbishing generator at the school, and providing back-up power to water and wastewater systems.
- Develop an updatable GIS system.

Medium Priority

- Identify naturally occurring high hazard areas.
- Evaluate county evacuation plan and update as necessary.
- Continue to use and consult other disaster plans and programs in area.
- Address specific needs of vulnerable populations in evacuation plans.

Low Priority

- Continue to coordinate with other agencies on rare but potentially catastrophic events.

Crow Reservation

Medium Priority

- Assess need for "Jaws of Life" for the Crow Agency Volunteer Fire Department.

Treasure County

High Priority

- Support the needs of first responders and emergency service providers in the growth policy and related documents.
- Update the countywide growth policy to address all hazards and encourage growth in low hazard areas.
- Gather input from first responders and emergency service providers when revising the growth policy that encourages growth in low hazard areas.

Medium Priority

- Encourage Burlington Northern Santa Fe (BNSF) Railroad to provide GPS coordinates for all emergency calls, including fire and ambulance requests.
- Update countywide subdivision regulations to adopt higher minimum standards for subdivisions that improve their all-hazard disaster resistance.
- Gather input and support the needs of first responders and emergency service providers when updating subdivision regulations that improve all-hazard disaster resistance.
- Support the needs of first responders and emergency service providers in the subdivision regulations and related documents.

Yellowstone County

Medium Priority

- Enhance hazard identification/comprehensive planning/GIS

Low Priority

- Subdivision disaster planning.

OBJECTIVE 1.5 - Increase readiness for the protection of prehistoric and historic cultural resources during an event.

Big Horn County

High Priority

- Develop and incorporate policies and methods for dealing with historic and cultural sites into fire agency standard operating procedures. Consider using outside assistance as part of an annual workshop/training to develop these procedures.
- Continue to work with landowners and other trustees of sites on an incident basis to identify sites and secure sites that are within reach of a fire.

Medium Priority

- Work with owners and managers of recorded sites to share fire suppression plans with local fire entities to familiarize responders with issues specific to the site.
- Expand public awareness about the need to protect historic sites.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 2 - Increase State's capability to provide and assist locals with mitigation opportunities.

OBJECTIVE 2.2 - Promote mitigation through supportive legislation and funding.

Rosebud County

High Priority

- Update city zoning regulations to mitigate development in hazardous areas.
- Gather input and support the needs of first responders and emergency service providers when updating subdivision regulations that improve all-hazard disaster resistance.
- Develop a countywide growth policy that encourages growth in low hazard areas.
- Update countywide subdivision regulations to adopt higher minimum standards for subdivisions that improve their all-hazard disaster resistance.
- Gather input and support the needs of first responders and emergency service providers when developing the growth policy that encourages growth in low hazard areas.
- Gather input and support the needs of first responders and emergency service providers when updating zoning regulations to mitigate development in hazardous areas.

Medium Priority

- Gather input and support the needs of first responders and emergency service providers when updating building codes that require disaster resistance.
- Update city building codes to require disaster resistance to hazards such as severe thunderstorms, wind, tornadoes, wildfire, winterstorms, terrorism, structure fire and earthquakes.

Yellowstone County

Medium Priority

- Develop wise building practices.

GOAL 3 - Reduce the community impacts of wildland and rangeland fires.

OBJECTIVE 3.1 - Enhance firefighting resources and improve firefighting capabilities.

Big Horn County

High Priority

- Complete the Hazard Assessment and Mitigation Plan for the Crow Reservation and implement recommendations.
- Annually review equipment and identify gaps and needs.
- Develop an outreach program for high school students to become members of volunteer fire departments.
- Secure adequate public water supplies, including hydrants. Address specific needs of towns in the county.
- Equip underground water supplies (e.g., cisterns) in gas fields and other locations (such as fire suppression water supplies in new subdivisions) with standardized connections so that firefighters can withdraw water.
- Continue to work to identify funding sources, such as grants, to acquire needed equipment.
- Continue to assure that there is adequate personal protective gear and communications upgrades as necessary.
- Continue to implement the actions identified for Muddy Cluster in the Wildfire Hazard Assessment and Mitigation Plan.
- Continue to implement actions identified in the Crow Fire Management Plan.
- Work with residents and landowners in the Pine Ridge and Sarpy-Tullock areas as individuals or in small groups to identify areas of fuel build-up.

Medium Priority

- For all other areas in the county, work with local residents and landowners to identify areas of fuel build-up and means to address.
- Work with Fidelity and other coal-bed methane exploration and development companies to identify available water supply sources as they become developed through the extraction process. Coordinate adequate access into the facilities.
- Identify and address hazard areas along the Big Horn River.

Low Priority

- Build recognition for firefighters.
- Submit articles to the media about the importance of firefighters, recognizing outstanding individuals, and information on how to participate and who to contact.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 3 - Reduce the community impacts of wildland and rangeland fires.

OBJECTIVE 3.1 - Enhance firefighting resources and improve firefighting capabilities.

Carbon County

High Priority

- Determine locations for additional water supplies and pursue funding to develop new water sources available for fire protection.
- Develop and/or purchase volunteer firefighter recruitment materials.

Medium Priority

- Conduct after action analyses for all major incidents or at least one annually by the Fire Council.
- Review existing MOUs.
- Develop new or update existing MOUs as needed.
- Work with the Carbon County News to feature one volunteer firefighter in the newspaper each month.
- Pursue grants for PPE and communications equipment upgrades.
- Continue to pursue grant opportunities for equipment and training.

Low Priority

- Attend a board meeting of the YBRA, the Girls Scouts, the Westminster Spires, and the Lion's Camp at the beginning of each summer to discuss fire prevention, fire protection and evacuation plans.

Crow Reservation

High Priority

- Continue to implement BIA Wildland Fire Plan, Tribal Fire Plan/Community Fire Plans and applicable portions of the Big Horn and Yellowstone counties CWPP.
- Install water supply monitors at storage facilities.
- Build additional water storage as needed.
- Ensure adequate water supplies and pressure for concurrent fire suppression and basic public needs.
- Identify needs for dry hydrants and install as needed.
- Bring all fire hydrants into working order.

Golden Valley County

Medium Priority

- Increase water storage facilities in town of Lavina.
- Install water tanks in outlying areas of the county.
- Obtain new fire truck for Ryegate.
- Recruit more volunteer fire fighters.
- Install a hydrant system in the town of Lavina to protect Main Street businesses which are connected wood structures.
- Construct new fire hall in Ryegate.
- Secure portable water pumps with large diameter piping that can be laid in the Musselshell River.

Musselshell County

High Priority

- Investigate sources of used fire fighting equipment to equip fire halls.

Medium Priority

- Integrate structure and wildland fire strategies.
- Recruit and provide continuing education for VFD and EMS personnel.
- Install water tanks in rural parts of the county.
- Install dry hydrants in rural parts of the county.
- Provide training for volunteer fire fighters for wildland certification.
- Develop incident command system (NIMS) through development of a local Type 3 Team.

Northern Cheyenne Reservation

High Priority

- Continue to implement BIA Wildland Fire Plan.
- Continue to implement applicable portions of the Big Horn County/Rosebud County CWPP.
- Install water supply monitors at storage facilities.
- Build additional storage as needed to ensure water systems are adequate for fire suppression needs.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 3 - Reduce the community impacts of wildland and rangeland fires.

OBJECTIVE 3.1 - Enhance firefighting resources and improve firefighting capabilities.

Northern Cheyenne Reservation

High Priority

- Continue to implement Tribal Fire Plan/Community Fire Plans.
- Ensure adequate water supplies and pressure for concurrent fire suppression and basic public needs.
- Identify needs for dry hydrants and install as needed.
- Bring all fire hydrants into working order.

Stillwater County

High Priority

- Build and equip an adequate Emergency Operations Center.
- Build and supply fully equipped dispatch facility.
- Create a map of the county showing water sources for fire fighting.
- Determine locations for additional water supplies and pursue funding to develop new water sources available for fire protection.
- Train EOC personnel in Disaster response.
- Continue to pursue grant opportunities for equipment and training.
- Assure that firefighters have adequate training opportunities.
- Compensate firefighters.
- Pursue grants for PPE and communications equipment upgrades.

Medium Priority

- Work with the Stillwater County News to feature one volunteer firefighter in the newspaper each month.
- Increase visibility of protection services.
- Review existing MOUs.
- Develop new or update existing MOUs as needed.
- Develop and/or purchase volunteer firefighter recruitment materials

Low Priority

- Invite the BNSF to conduct annual briefings and training sessions on response to hazmat carried by the railroad.

Treasure County

High Priority

- Host Montana Dept. of Natural Resources and Conservation's Map and Compass Training once every two years.
- Encourage landowners to purchase basic equipment such as radios and water tanks to possibly aid in firefighting efforts once trained.
- Bring in state and federal instructors for basic wildland fire training in Treasure County.

Medium Priority

- Identify people in different geographic parts of the county that know the fuels and terrain and can act as liaisons to state and federal firefighting units.
- Train the identified liaisons (local people with knowledge of fuels and terrain) in basic firefighting terminology and their roles during a wildfire.
- Pre-identify locations of water storage such as stock ponds that could be used during a wildfire.
- Draft agreements with landowners for using water supplies (such as stock ponds) to suppress wildfires.

Low Priority

- Discuss alternatives to paying wildland firefighters with other rural counties and volunteer fire departments.
- Develop a better pay or incentive system for local wildland firefighters to fight the fires.

Wheatland County

High Priority

- Recruit and provide continuing education for VFD and EMS personnel.
- Develop regional water system with dry hydrants in each community.
- Integrate structure and wildland fire strategies.

Medium Priority

- Install dry hydrants in the north portion of the county.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 3 - Reduce the community impacts of wildland and rangeland fires.

OBJECTIVE 3.1 - Enhance firefighting resources and improve firefighting capabilities.

Wheatland County

Medium Priority

- Construct new fire complex for Harlowton.
- Obtain brush truck for town of Judith Gap.
- Obtain fire tender for town of Judith Gap.

Yellowstone County

Medium Priority

- Construct rural dry hydrants.

OBJECTIVE 3.2 - Reduce fuels in the wildland urban interface (WUI), rangeland and communities.

Big Horn County

High Priority

- Continue to mow along roads in the county and to do this early in the fire season.
- Continue to mow and/or plow fire breaks around communities at risk.
- Address fuel build-up and unmanaged fuels in Lodge Grass.
- Work with Burlington Northern Santa Fe (BNSF) to participate in mowing or prescribed burns along the rail corridor to reduce fuel build-up.

Medium Priority

- Assess need and implement as necessary fire breaks around communication facilities, including radio repeater stations.
- Sponsor community Fire clean-up day and/or other special events in communities throughout the county.

Carbon County

High Priority

- Pursue WUI fuel reduction projects in high risk areas around the county including the Forest Service and the Red Lodge West BLM-private cooperative project.

Medium Priority

- Continue work to implement assisting with fuel reduction at the 400 Ranch.
- Continue Forest Service project to offer fuels reduction around recreation residences in the Main Canyon and the West Fork of Rock Creek.
- Monitor drought stress and mortality in timbered areas.
- Monitor amount of contracted acreage in CRP.

Low Priority

- Meet with Klammerts Tie Yard to discuss fire prevention and encourage development of a prevention and response plan.
- Jointly develop a fuels reduction project for the Grove Creek major subdivision area south of Belfry (BLM, FS, RFD and private landowners).
- Demolish the grain elevator at Edgar.

Golden Valley County

High Priority

- Collaborate with USFS and BLM on fuel reduction projects.
- Create defensible space around structures and promote FIREWISE programs in communities.

Medium Priority

- Create fuel breaks east and west of Ryegate and Lavina.
- Provide better weed control around town of Lavina.
- Coordinate with landowners for enhanced grazing around towns to reduce fuels.
- Clean up slash piles in the community of Lavina.
- Modify fuels in Bull Mountains.

Musselshell County

High Priority

- Develop a County-wide fire district for continued wildfire suppression and the implementation of structure protection.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 3 - Reduce the community impacts of wildland and rangeland fires.

OBJECTIVE 3.2 - Reduce fuels in the wildland urban interface (WUI), rangeland and communities.

Musselshell County

Medium Priority

- Coordinate with other agencies and landowners regarding construction of fire breaks.
- Coordinate with other agencies and landowners for implementation of fuels reduction projects.

Northern Cheyenne Reservation

High Priority

- New construction will be of "fire-wise" materials.
- Enforce existing Housing Authority ordinances related to fire reduction and suppression.
- Continue fuel reduction in the wildland urban interface.

Rosebud County

High Priority

- Maintain the fuel breaks and reductions, particularly on the western and southern ends of subdivisions.
- Coordinate with Colstrip Parks and Recreation and PPL to remove dead/dying trees from common areas.
- Create fuel breaks and reduce fuels around communities, particularly the City of Colstrip.
- Encourage and provide funding for homeowners in the wildland urban interface to create defensible space from wildfires around their homes and outbuildings using FireWise principles.
- Form a Fire Safe Council with the BLM, USFS, ranchers, fire departments, Rosebud Co. Disaster & Emergency Services, Rosebud Co. commissioners, power companies and others to plan fuel reduction projects on a landscape basis.
- Coordinate fuel reduction opportunities between private landowners and the Custer National Forest, the BLM and the Northern Cheyenne Tribe.
- Solicit more landowner involvement in fuel reduction projects.

Medium Priority

- Encourage utility companies to clear utility right-of-ways of hazardous fuels.

Low Priority

- Replace old road signs with non-combustible reflective road signs.

Stillwater County

High Priority

- Pursue WUI fuel reduction projects in high-risk areas around the county.
- Monitor fuel load, drought stress and vegetation mortality.

Medium Priority

- Jointly develop a fuels reduction project for the major subdivision area (BLM, FS, RFD and private landowners).
- Monitor amount of contracted acreage in CRP.

Treasure County

High Priority

- Use state provided information on insect kill and drought kill for future mitigation projects and response planning.
- Have a state forester inspect trees for insect kill and drought kill.

Medium Priority

- Form a committee consisting of the BLM, MT DNRC, Treasure Co. Fire Dept., Treasure No. DES, Treasure Co. Commissioners, power companies and landowners to plan fuel reduction projects on a landscape basis.
- Encourage and provide funding for homeowners in the wildland urban interface to purchase fire resistant building materials and create defensible space from wildfires around their homes and outbuildings using FireWise principles.
- Create fuel breaks and reductions in all hazard areas but particularly in high hazard areas such as the Hysham Hills and near homes and ranches.

Low Priority

- Minimize impacts to wildlife and other values with public lands fuels mitigation.
- Continue efforts to eradicate weeds and remove brush from public lands, including Howrey Island and Isaac Homestead.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 3 - Reduce the community impacts of wildland and rangeland fires.

OBJECTIVE 3.2 - Reduce fuels in the wildland urban interface (WUI), rangeland and communities.

Wheatland County

High Priority

- Implement fuel reduction projects.
- Coordinate with other agencies for implementation of fuels reduction projects in county fire plan.
- Maintain watered landscape (green areas) around towns to serve as firebreak.
- Mow and clean up fuels in all communities.
- Remove abandoned structures in all communities.

Medium Priority

- Coordinate with other agencies for implementation of fuels reduction projects including Deadman's Basin, Snowy Mountain, Musselshell River near Harlowton, Timber Creek church camp, and around Shawmut.

Yellowstone County

Medium Priority

- Older building sprinkler installations.

OBJECTIVE 3.3 - Enhance community awareness of wildfires through education.

Big Horn County

High Priority

- Update the "Way of the West" publication that was prepared by the county to inform new and existing residents about what to expect in rural Big Horn County. Include information on wildfire issues and response times.
- Provide information about personal safety in a wildfire situation and distribute via the media and presentations at schools, etc.
- Continue to provide training and extend training for staff and volunteers.
- Develop programs geared to school-age children about fire safety and utilizing techniques to prevent experimentation with fire and arson.
- Provide education on ways to make properties less susceptible to wildfire, understanding wildfire, and role of fire (and/or other disturbance) in long-term land health/productivity.

Medium Priority

- Provide public education about how to reduce post-fire impacts.
- Identify and fund a staff person to provide public education on fire preparedness.

Carbon County

Medium Priority

- Raise awareness of fire danger through an advertising campaign including a series of articles, mailings and billboards.
- Host a Firewise workshop for rural subdivisions in the Red Lodge area.
- Target rural property owners and second home owners by including a fire prevention message with property tax notices.
- Develop and provide a workshop that would qualify for continuing education credits for architects, engineers, and realtors on defensible space and fire wise principles.
- Develop and provide a workshop on defensible space and Firewise principles for the county planning staff and planning board.
- Assist Red Lodge Mountain in replacing wood roofs with metal roofs on four base area buildings, creating defensible space on the south side of the Administration building, and thinning to protect the Palisades quad lift.
- Bury 12 miles of electrical lines in the West Fork of Rock Creek drainage.

Low Priority

- Invite the BNSF to conduct annual briefings and training sessions on response to hazmat carried by the railroad.
- Develop or purchase evacuation pamphlets and distribute to rural residents.

Crow Reservation

High Priority

- Provide education and information to the general public on how to reduce the number of human-caused fires.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 3 - Reduce the community impacts of wildland and rangeland fires.

OBJECTIVE 3.3 - Enhance community awareness of wildfires through education.

Golden Valley County

High Priority

- Provide training for volunteer fire fighters for wildland certification.

Medium Priority

- Implement ordinances to not allow shake shingle roofs in fire-prone areas.

Musselshell County

High Priority

- Educate public on FIREWISE practices.
- Develop FIREWISE programs in communities.
- Provide community fire education regarding fuel reduction projects.

Medium Priority

- Develop or obtain training DVD on wildland firefighting and risk reduction that can be distributed to ranchers and homeowners.

Rosebud County

Medium Priority

- Educate the homeowners on their wildland fire hazard.

Stillwater County

High Priority

- Raise awareness of fire danger through an advertising campaign including a series of articles, mailings and billboards.

Medium Priority

- Develop and provide a workshop that would qualify for continuing education credits for architects, engineers and realtors on defensible space and fire wise principles.
- Educate the public about the benefits of metal roofing.
- Target rural property owners and second homeowners by including a fire prevention message with property tax notices.
- Bury electrical lines where possible.
- Host a Fire Wise workshop for rural subdivisions.
- Develop and provide a workshop on defensible space and fire wise principles for the county planning staff, planning board and fire personnel.

Low Priority

- Develop or purchase evacuation pamphlets and distribute to rural residents.

Treasure County

High Priority

- Familiarize landowners with the local, state, and federal firefighting systems and how they interact.
- Engage landowners in wildfire mitigation, preparedness, and response through a series of meetings throughout the county.
- Provide basic information and training on wildland firefighting and response.

Medium Priority

- Show the Montana Dept. of Natural Resources and Conservation's Eastern Montana Wildfire Awareness Video at a wide variety of local meetings in Treasure County.

Wheatland County

High Priority

- Develop or obtain training DVD on wildland firefighting and risk reduction that can be distributed to ranchers and homeowners.

Medium Priority

- Coordinate with ranches in north portion of county on placement of dry hydrants.

Yellowstone County

High Priority

- Firewise demonstration houses.
- Increase Firewise awareness.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 3 - Reduce the community impacts of wildland and rangeland fires.

OBJECTIVE 3.3 - Enhance community awareness of wildfires through education.

Yellowstone County

Medium Priority

- Wise building practices.

OBJECTIVE 3.4 - Accurately assess and address the current wildland urban interface problems at the subdivision level.

Big Horn County

High Priority

- Develop a building code for fire safety purposes (using the NFPA codes as a starting point).
- Review subdivision applications to make sure they meet fire safety requirements.
- Review and revise as necessary the subdivision regulations to address fire safety needs.
- Work with tribal governments and housing authorities in order that new housing and other developments are built in defensible areas.

Carbon County

High Priority

- Have county attorney provide a training session for chiefs on providing input to subdivision review process.
- Develop regulatory mechanism to ensure that subdivisions are built as approved and fire protection systems are initially and periodically certified.

Medium Priority

- Identify those areas of the county with constructed assets at risk and no physical access. Meet with property owners or subdivision associations to pursue remedies.

Musselshell County

Medium Priority

- Amend existing building codes to apply equally to new single housing construction as it does to subdivisions to minimize risks to firefighters.
- Develop County policy concerning access in moderate to high risk WUI areas where subdivisions are built to insure adequate ingress and egress during wildfire emergencies.
- Develop County policy concerning building materials used in high risk WUI areas on new construction.

Rosebud County

Medium Priority

- Explore ingress and egress options with the homeowners in subdivisions.
- Meet with the Wild Horse and Bascom Subdivisions Homeowners Associations (if active) about subdivision access.

Stillwater County

High Priority

- Have county planning office provide a training session for fire chiefs on providing input to subdivision review process.
- Develop regulatory mechanism to ensure that subdivisions are built as approved and fire protection systems are initially and periodically certified.

OBJECTIVE 3.5 - Enhance effectiveness of response and evacuation.

Big Horn County

High Priority

- Annually provide a workshop or training session for individuals who may find themselves as first responders to fire.
- Annually review existing 911 system and identify any issues, need for drills/exercises, or staff training.
- Involve all fire response teams (public, private—e.g., for coal mines, oil and gas, etc.) in stakeholder groups and planning for fire response.
- Identify and address problems with access on existing county roads (e.g., such as some county roads in the Pine Ridge area).
- Identify "safe areas" and evacuation plans for each community in the county.

Medium Priority

- Encourage homeowners to work with the fire depts. and other homeowners to provide adequate access.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 3 - Reduce the community impacts of wildland and rangeland fires.

OBJECTIVE 3.5 - Enhance effectiveness of response and evacuation.

Big Horn County

Medium Priority

- Make sure that steps to reporting a fire are clear to residents. Review the telephone books annually to ensure that information is correct.
- Public agencies to develop and follow post-fire procedures to reduce impacts.
- Provide information on the access requirements for firefighting equipment to homeowners throughout the county.
- Hold an annual workshop to review past fire season and prepare for upcoming season.

Carbon County

High Priority

- Better communication with the local media about Red Flag warnings.
- Work with commercial providers to improve cellular communications in the Clarks Fork Valley.
- Work with the State of Montana and the Custer National Forest to develop a safe area in the West Fork drainage.
- Develop an evacuation plan for each interface subdivision/area.

Musselshell County

High Priority

- Enhance evacuation procedures associated with wildfire events.
- Develop sheltering strategy.

Medium Priority

- Develop a formal rural Fire Chief position within the County to manage overhead responsibilities across all county fire departments' response areas.

Northern Cheyenne Reservation

High Priority

- New development will be designed and built to ensure access by fire suppression equipment.
- Keep streets in town clear of abandoned vehicles and other items that can restrict access by firefighting equipment.

Medium Priority

- Identify critical roads and bridges in need of improvements for access by firefighting equipment and implement needed changes.

Stillwater County

High Priority

- Better communication with the local media about Red Flag warnings.
- Look for quicker ways to publicize fire danger information.
- Preplan reverse 9-1-1 areas and enter data into system.
- Develop an evacuation plan for each interface subdivision/area.
- Continue to improve the E-911 system.

Medium Priority

- Identify those areas of the county with constructed assets at risk and no physical access. Meet with property owners or subdivision associations to pursue remedies.
- Work with commercial providers to improve cellular communications in the Stillwater Valley.
- Conduct after action analyses for all major incidents or at least one annually by the Fire Council.

Treasure County

Medium Priority

- Use a county road grader for county and private road improvements that will reduce vehicle sparks and improve access for emergency responders.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 3 - Reduce the community impacts of wildland and rangeland fires.

OBJECTIVE 3.6 - Establish mapping or record keeping practices to support fuel management strategies.

Big Horn County

High Priority

- Develop a detailed map of critical infrastructure (e.g., power lines, roads, etc.), locations of fire fighting equipment and infrastructure, water sources, etc., and review and update annually.
- Develop, review, and update annually a roster of contact information for fire fighting resources (both in-county and those available out-of-county), with names of contacts, lists of equipment, and other information useful for firefighting.

Medium Priority

- Identify a GIS technician and other technical assistance in the county to develop, coordinate and update GIS maps and the detailed roster information.

Carbon County

High Priority

- Create a map of the county showing water sources for fire fighting.

Medium Priority

- Identify criteria for fire use allowing natural ignitions to continue burning within parameters.
- Develop goals and projects to return those areas determined desirable to their natural fire regime and manage other lands appropriately.
- Develop desired condition maps, identifying condition class.
- Set up "call-out" data base in cooperation with dispatch center to document the number of responses.
- Report all responses to the state as requested.
- Explore residents' willingness in the two uncovered areas (Piney Creek County District 16-2, and private parcel 141-A) to obtain formal coverage.

Musselshell County

Medium Priority

- Develop GPS database of water sources in County to enhance fire fighting efforts.

Rosebud County

Medium Priority

- Create digital files of local fire perimeters using GPS and GIS technologies.
- Create a countywide database of local wildfires.

Stillwater County

High Priority

- Develop maps of the wildland urban interface areas with safety zones and escape routes.

Medium Priority

- Explore residents' willingness in uncovered areas to obtain formal coverage.
- Report all responses to the state as requested.
- Work on improving "call-out" data base.

Treasure County

Medium Priority

- Put printed copies of road and structure maps in emergency response vehicles.
- Develop a system to replenish the water (i.e., from stock ponds) used in the firefighting efforts.
- Create digital files of local fuel types and conditions.
- Use digital mapping to better outline the hazard areas and conduct exercises.
- Improve road mapping (including private roads) and structure locations.
- Gather GPS coordinates of water supply locations (such as stock ponds).

Yellowstone County

Medium Priority

- Conduct wildland fire mapping.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 4 - Minimize economic impacts of drought.

OBJECTIVE 4.1 - Identify water retention projects that could lessen the effects of drought.

Big Horn County

High Priority

- Identify options/mechanisms for improving water supply.

OBJECTIVE 4.2 - Provide education and incentives for minimizing the effects of drought.

Big Horn County

High Priority

- Provide information to the public about water shortage and water conservation.

Low Priority

- Bring in outside technical expertise.

Northern Cheyenne Reservation

Medium Priority

- Continue public awareness and water conservation measures.

Stillwater County

Medium Priority

- Distribute drought information in welcome packets to new residents.
- Run media spots on drought mitigation.

OBJECTIVE 4.3 - Improve drought monitoring and assessments.

Big Horn County

High Priority

- Identify options/mechanisms to reduce water demand.

Medium Priority

- Host forum to identify and address water supply/use issues.

Crow Reservation

High Priority

- Bring various parties together and begin a dialog on ways to address long-term effects of drought on surface water.
- Participate in other drought-related efforts in the region.
- Identify existing water demands and quantify use by type, including agricultural, community water supplies, needs for wildlife and fisheries.

Northern Cheyenne Reservation

Medium Priority

- Institute a grasshopper control program like Big Horn County.

Stillwater County

High Priority

- Gather drought and water data resources.
- Utilize existing Stillwater County Drought Committee to evaluate and determine if water distribution planning is needed and practical.

Medium Priority

- Monitor and review data regarding vegetation (fuel) moisture.
- Collaborate with US Weather Service and local weather monitoring station operators to assure adequate, county specific drought information is being collected.
- Monitor water well data and groundwater conditions.
- Identify opportunities for water storage.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 5 - Mitigate the potential loss of life and property from flooding.

OBJECTIVE 5.1 - Provide adequate warning of flooding events.

Big Horn County

Medium Priority

- Continue to test emergency response for dam failure.

Carbon County

High Priority

- Broadcast weather warnings through dispatch.
- Implement E-911, reverse calling.

Medium Priority

- Devise warning system for failure of Cooney Reservoir.
- Maintain network of flood watchers.
- Devise warning system for failure of Glacier Lake Dam

Golden Valley County

Medium Priority

- Install an early warning system on Deadman's Basin Dam to interface with dispatch in Ryegate.
- Provide NOAA weather radios to ranchers downstream from Deadman's Basin Dam and residents in Ryegate.

Northern Cheyenne Reservation

Medium Priority

- Build a bridge to access homes on the other side of Rosebud Creek (near Busby).

Stillwater County

High Priority

- Implement E-911 and implement the reverse calling function.
- Continue to broadcast warning information from the National Weather Service through dispatch.
- Install an automated warning system for failure of Mystic Lake Dam.

Medium Priority

- Maintain network of flood watchers to monitor build up, runoff, and precipitation events.
- Educate potentially affected citizens about warning system for dam failure.

Wheatland County

High Priority

- Provide NOAA weather radios to ranchers downstream from Bair, Martinsdale and Deadman's Basin Dams.

Medium Priority

- Install an early warning system on Bair, Martinsdale and Deadman's Basin Dams to interface with dispatch

OBJECTIVE 5.2 - Reduce the number of current and future structures in the floodplain.

Big Horn County

Medium Priority

- Examine potential impacts of flushing flows to existing and future development along the Big Horn River.

Low Priority

- Identify and implement options to reduce impacts to new and existing development in high hazard flood areas.

Carbon County

High Priority

- Work with FEMA to study floodplain delineations.

Medium Priority

- Procure maps of revised floodplains as appropriate.
- Provide information about building in the floodplain.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 5 - Mitigate the potential loss of life and property from flooding.

OBJECTIVE 5.2 - Reduce the number of current and future structures in the floodplain.

Crow Reservation

Medium Priority

- Until other information is available, use the aerial photos of the 1978 flood to locate new development outside of flood-prone areas.

Musselshell County

Medium Priority

- Develop ordinances and residential zoning designed to prevent new construction in floodplain.

Northern Cheyenne Reservation

High Priority

- Continue to use flood plain maps in siting new development.

Stillwater County

Medium Priority

- Make information available to the public about building in the floodplain.

Yellowstone County

Medium Priority

- Resolution of Clarks Camp problem.
- Floodplain mapping.
- New floodplain regulations.

Low Priority

- Repetitive loss structure buyout.

OBJECTIVE 5.3 - Prevent flooding of structures and infrastructure.

Big Horn County

High Priority

- Assess and address storm drainage and flood issues along roadways in the county.
- Assess and address storm drainage issues in Lodge Grass.
- Assess and address storm drainage issues in Hardin.

Low Priority

- Identify and address potential impacts of flooding on water supply and waste water systems.

Carbon County

Medium Priority

- Maintain sand bag supplies.
- Develop a storm drainage plan for Red Lodge.
- Remove old bridge abutments in Rock Creek to prevent flooding.
- Address drainage problem at Cedarwood Villa Nursing Home.

Crow Reservation

High Priority

- Address storm drainage issues in downtown Lodge Grass.
- Assess and address need for storm drainage improvements in Crow Agency and other communities.
- Identify and address blockages caused by beaver, downed trees, debris, etc. in Lodge Grass and other communities on the Reservation.

Medium Priority

- Work with BIA, Big Horn County, Montana Dept of Transportation, Crow Tribal Public Works to identify storm drainage issues for roads.

Golden Valley County

Medium Priority

- Install larger culverts/drainage structures where repetitive flood damage occurs.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 5 - Mitigate the potential loss of life and property from flooding.

OBJECTIVE 5.3 - Prevent flooding of structures and infrastructure.

Musselshell County

Medium Priority

- Update dike around city water supply.
- Anchor fuel oil tanks at residences in floodplain.
- Develop ice jam control procedures.
- Remove debris and logs within the Musselshell River drainages

Low Priority

- Elevate highway in south portion of county (access to Billings).

Rosebud County

Medium Priority

- Regularly clean out culverts throughout the county.
- Explore drainage and culvert needs on the road between Ashland and Birney.
- Provide homeowners with water quality testing resources to identify well contamination after a flood event.
- Educate the residents of Rosebud and Hathaway on the potential for well contamination during Yellowstone River flood events.

Stillwater County

High Priority

- Address drainage issue at Montana Silversmiths.

Medium Priority

- Develop a storm drainage plan for Columbus.
- Maintain sand bag supplies at each road district.

Treasure County

High Priority

- Upgrade and maintain the electric utility's river crossing structures.

Low Priority

- Maintain culvert capacities by regularly clearing the culverts of debris.
- Identify locations for new culvert installations.
- Evaluate culverts throughout the county for flood capacities.
- Replace hazardous culverts in flood prone areas.

Wheatland County

High Priority

- Remove debris and logs in waterways to prevent flooding.

Medium Priority

- Construct structural projects in Harlowton to update dikes.
- Consider structural project in Shawmut where flood waters overtop railroad grade and impact town properties.

Yellowstone County

High Priority

- Highway 87/Alkali Creek crossing improvement.

Medium Priority

- Highway 3 storm water runoff management.
- Storm drain in Laurel (refer to mitigation plan January 22, 2002).
- Reduce Rimrock Road and Molt Road flooding.
- Billings west end retention pond/diversion channel.

Low Priority

- Reduce Echo Canyon/Zephyr Lane flooding.
- Feasibility study for irrigation canal unloading structures/linear parks.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 5 - Mitigate the potential loss of life and property from flooding.

OBJECTIVE 5.4 - Increase the public awareness of flood mitigation.

Carbon County

Medium Priority

- Invite the NWS to make a presentation on flooding.
- Educate citizens about dam failure warning system.

Crow Reservation

Medium Priority

- Make sure that the DES office has copies of the Flood Hazard Boundary maps and aerial photos.

Musselshell County

Medium Priority

- Educate public on flood prevention and protection measures.

Stillwater County

Medium Priority

- Invite the National Weather Service to give a presentation on flooding.

Yellowstone County

High Priority

- Increase floodplain awareness.

OBJECTIVE 5.5 - Improve the effectiveness of the flood insurance programs.

Big Horn County

High Priority

- Work to complete the FEMA FIRM floodplain maps for the entire county.

Crow Reservation

Medium Priority

- Assess the benefits and costs of participation and make decision on whether to participate in the National Flood Insurance program.
- Invite FEMA representative(s) to present the National Flood Insurance program to the Crow Tribe.

Golden Valley County

Medium Priority

- Conduct elevation survey of buildings in Ryegate subject to flooding.

Musselshell County

High Priority

- Educate public on flood insurance.

Rosebud County

Medium Priority

- Update county floodplain mapping for the National Flood Insurance Program.

OBJECTIVE 5.6 - Reduce the risk of dam or levee failure.

Big Horn County

Medium Priority

- Increase awareness among smaller dam owners of maintenance and upkeep needs.

Golden Valley County

Medium Priority

- Install movement sensors on face of Deadman's Basin Dam to detect pending failure.

Wheatland County

Medium Priority

- Install movement sensors on face of Bair, Martinsdale and Deadman's Basin Dams to detect pending failure.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 5 - Mitigate the potential loss of life and property from flooding.

OBJECTIVE 5.6 - Reduce the risk of dam or levee failure.

Yellowstone County

Medium Priority

- 12-Mile Creek- Dam failure on Box Spring Road.

GOAL 6 - Reduce impacts from severe winter weather.

OBJECTIVE 6.1 - Increase community capabilities to mitigate winter weather hazards.

Carbon County

High Priority

- Maintain shelter agreements with the American Red Cross.
- Pursue improved cellular communications in Clarks Fork Valley.
- Develop a shelter plan for stranded individuals.

Medium Priority

- Publish county snow removal priorities annually.
- Develop a list of snow removal equipment in the county.
- Purchase back-up generators for shelter locations.
- Purchase back-up generators on trailers to be cached.
- Implement an agreement with Wyoming DOT for snow removal.
- Assist utilities in snow removal to restore power.
- Implement an agreement with Park County, WY for snow removal.
- Support preparation of utility Emergency Restoration plans.
- Utilize new communications trailer.
- Add a repeater at Bridger.

Crow Reservation

High Priority

- Coordinate with all jurisdictions responsible for roads on or across the reservation to identify critical snow plow routes.
- Establish methodology for ensuring snow routes are plowed and which entity will have primary responsibility on which routes.

Medium Priority

- Identify how to improve access to livestock during snow snowstorms.
- Trim dead and diseased limbs from large trees around city.

Golden Valley County

High Priority

- Obtain NOAA weather radios for critical facilities.

Medium Priority

- Obtain generators for schools to maintain power supply during winter.

Musselshell County

High Priority

- Provide NOAA weather radios for county residents at a reduced price.
- Obtain NOAA weather radios for critical facilities.

Medium Priority

- Coordinate with utility company for enhanced infrastructure in County to include shorter span distances between utility poles.
- Obtain portable generators for schools.
- Install pigtail connectors at schools to accommodate portable generators.

Northern Cheyenne Reservation

High Priority

- Roads should be cleared of snow (with priority for evacuation routes, main travel routes).

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 6 - Reduce impacts from severe winter weather.

OBJECTIVE 6.1 - Increase community capabilities to mitigate winter weather hazards.

Treasure County

High Priority

- Upgrade and maintain the electric distribution and transmission system for snow and wind resistance.

Wheatland County

Medium Priority

- Obtain generators for emergency shelters.
- Obtain cots, blankets and pillows for emergency shelters.
- Obtain generator for city complex in Judith Gap.
- Obtain NOAA weather radios for roadside cafes and bars for motorists traveling through the area.

OBJECTIVE 6.2 - Increase public awareness of winter weather hazards.

Carbon County

High Priority

- Educate people about shelter plan.
- Continue to issue storm warnings.

Medium Priority

- Invite NWS to make school presentations.
- Distribute winter storm information to new residents.

Low Priority

- Media spots on winter survival.

Crow Reservation

High Priority

- Share snow route information with the public.

Medium Priority

- Target severe winter weather education programs for the young.
- Involve schools in severe winter weather awareness program for the young.
- Work with landowners and others to identify needs and best mechanisms to address reduction of impacts to livestock from severe winter weather.

GOAL 7 - Reduce impacts from severe summer weather.

OBJECTIVE 7.1 - Increase community capabilities to mitigate summer weather hazards.

Carbon County

Medium Priority

- Purchase weather radios.
- Enforce Red Lodge building codes.
- Sponsor weather spotter training.
- Assess tree hazards and contract a faller.

Golden Valley County

Medium Priority

- Obtain shatterproof film for windows at critical facilities.

Musselshell County

Medium Priority

- Install protective film on windows at critical facilities to prevent shattering of glass.

Stillwater County

High Priority

- Host an educational program for local architects, engineers, and contractors on building standards and materials for hail events.

Medium Priority

- Create communication systems with all infrastructure systems at risk.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 7 - Reduce impacts from severe summer weather.

OBJECTIVE 7.1 - Increase community capabilities to mitigate summer weather hazards.

Stillwater County

Medium Priority

- Make a bulk purchase of weather radios for public buildings and households.

Wheatland County

High Priority

- Obtain safety film for windows to prevent shattering of glass.

OBJECTIVE 7.2 - Increase public awareness of ways to mitigate summer weather hazards.

Carbon County

Medium Priority

- Educate public about utility R-O-W.
- Host program on building material and standards for wind events.
- Brochures for building material and practices to avoid wind damage.
- Educate the public to report trees down on power lines.

Stillwater County

Medium Priority

- Gather and distribute information about Crop Hail Insurance Program.

Yellowstone County

Medium Priority

- Increase high winds awareness.

GOAL 8 - Reduce losses from hazardous material incidents.

OBJECTIVE 8.1 - Provide education, training on haz-mat incidents and response.

Carbon County

Medium Priority

- Obtain hazmat training.
- Assess past hazmat spills.

Crow Reservation

High Priority

- Review and update Tribal Hazardous Materials Response Plan and relevant portions of EOP as needed.
- Continue to secure training and necessary equipment for hazardous materials responders-move level of training up from "awareness" to operations and use of Class C suits.

Golden Valley County

Medium Priority

- Consider emergency warning system at Cushman Crossing that interfaces with dispatch in Lavina.

Musselshell County

High Priority

- Develop communication plan for hazardous material emergencies.

Medium Priority

- Plan alternate evacuation routes for instances when future coal trains block intersections.
- Provide hazardous material training to emergency responders.
- Enhance evacuation procedures associated with highway incidents and future railroad.
- Develop an emergency transportation plan that considers key roadways and future railroad intersections.
- Develop and improve hazardous material response strategies

Northern Cheyenne Reservation

Medium Priority

- Conduct field training and exercises to ensure timely response to hazardous materials events.
- Continue to secure training and necessary equipment for hazardous materials responders.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 8 - Reduce losses from hazardous material incidents.

OBJECTIVE 8.1 - Provide education, training on haz-mat incidents and response.

Northern Cheyenne Reservation

Medium Priority

- Update Tribal Hazardous Materials Plan (Tribal Fire Dept.).

Stillwater County

Medium Priority

- Conduct an assessment of past hazardous material spills and analyze the type, location and cause. Determine whether any action is needed in response.
- Continue to obtain and offer training for responders in how to respond to those materials being transported through the county.

OBJECTIVE 8.2 - Identify and secure hazardous materials locations and transporters.

Carbon County

Medium Priority

- Obtain hazardous materials list from BNSF.

Crow Reservation

High Priority

- Identify pipelines across reservation and work with companies on how to avoid spills and how to address them when accidents happen.
- Work with Burlington Northern-Santa Fe Railroad to identify major causes of train derailments and potential mitigation measures.
- Work with Montana Dept. of Transportation, BIA, Big Horn County to assess significant problem areas for vehicle accidents and means to address them.

Musselshell County

Medium Priority

- Develop mitigation measures for the developing coal mine and subsequent shipping railroad.

Northern Cheyenne Reservation

High Priority

- Establish comprehensive tribal traffic regulations for the Reservation.

Medium Priority

- Get more law enforcement on the highways to enforce speed limits.

Stillwater County

Medium Priority

- Request a list of the top 25 hazardous materials being transported through the county on the railroad from Montana Rail Link.

OBJECTIVE 8.3 - Support hazardous materials regulations and agreements.

Carbon County

High Priority

- Review agreements for hazmat response.

Medium Priority

- Update/execute new hazmat response agreements as needed.

Crow Reservation

High Priority

- Improve communication and coordination among the various responders (e.g., BIA, HIS, National Park Service).
- Improve coordination with advanced hazardous materials teams that need to be called in for hazardous materials events that are beyond the certified capabilities of the local tribal team.

Golden Valley County

Medium Priority

- Initiate dialog with railroad on measures to reduce derailments.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 8 - Reduce losses from hazardous material incidents.

OBJECTIVE 8.3 - Support hazardous materials regulations and agreements.

Northern Cheyenne Reservation

Medium Priority

- Improve coordination with advanced hazardous materials teams that need to be called in for hazardous materials events that are beyond the certified capabilities of the local tribal team.

Stillwater County

High Priority

- Review agreements for hazmat response assistance.

Medium Priority

- Update or execute new agreements as needed.

GOAL 10 - Reduce the likelihood of communicable disease outbreaks.

OBJECTIVE 10.1 - Reduce losses associated with a human health emergency.

Carbon County

High Priority

- Develop education campaign about benefits of immunization.
- Continue with infectious disease protection education.
- Develop mosquito control.

Medium Priority

- Improve communications between health officials in county.
- Sponsor animal disease awareness training.
- Sponsor veterinarian continuing education.
- Educate the public about proper disposal of animal carcasses.
- Educate officials about health planning.
- Coordination with Dept. of Health and Human Services for health officer during incident.
- Raise public awareness about animal disease resources.
- Order wall charts for situation assessment.
- Identify one or more locations in county for mass carcass disposal.
- Develop protocol for mass carcass disposal.
- Form an EPI Team in the county.

Northern Cheyenne Reservation

High Priority

- Implement recommendations made by the EPA in Sanitary Surveys of public water supplies.

Medium Priority

- Continue to address remediation of underground fuel storage tank leaks.

Stillwater County

High Priority

- Develop mosquito control.
- Develop education campaign about benefits of immunization.
- Continue with infectious disease protection education.

Medium Priority

- Form an EPI Team in the county.
- Sponsor veterinarian continuing education.
- Improve communications between health officials in county.
- Educate officials about health planning.
- Coordination with Dept. of Health and Human Services for health officer during incident.
- Raise public awareness about animal disease resources.
- Order wall charts for situation assessment.
- Identify one or more locations in county for mass carcass disposal.
- Educate the public about proper disposal of animal carcasses.

LOCAL MITIGATION PROJECTS

DES DISTRICT 5

GOAL 10 - Reduce the likelihood of communicable disease outbreaks.

OBJECTIVE 10.1 - Reduce losses associated with a human health emergency.

Stillwater County

Medium Priority

- Sponsor animal disease awareness training.
- Develop protocol for mass carcass disposal.

GOAL 11 - Encourage mitigation of potentially devastating but historically less frequent hazards.

OBJECTIVE 11.1 - Prevent losses from acts of terrorism, violence and civil unrest.

Yellowstone County

High Priority

- Enemy attack/terrorism plan update.

Medium Priority

- Develop school violence prevention.